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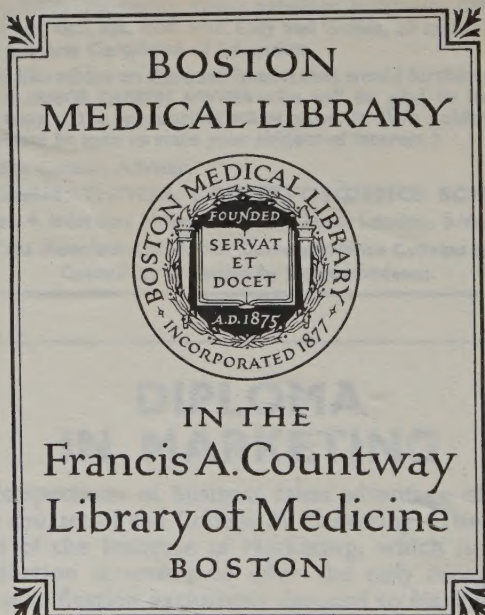
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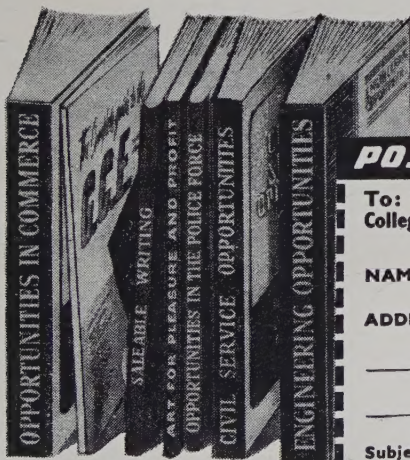
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British Qualifications

BRITISH QUALIFICATIONS

British Qualifications

*A comprehensive guide to educational, technical,
professional and academic qualifications
in Britain*

COMPILED BY BARBARA PRIESTLEY

Edited by Philip Kogan



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Foreword

We live today in a society where qualifications are becoming ever more important; at the same time they are growing in number and in complexity. This book is intended as a guide to the myriad examinations and examining institutions which rule so much of our working life.

Each year qualifications multiply, new courses are set up and existing examinations are changed in emphasis, in content or in standard; at the same time a whole new pattern of qualifications is being built up to meet the needs of technological advance, a pattern which also reflects changes in educational and social theory. The last few years have seen the planning and introduction of the Certificate of Secondary Education, the constitution of Diplomas in Technology and their replacement by the degrees of the Council for National Academic Awards and the institution of different kinds of training for social work. First degree courses for teachers, combining professional and academic education, are just being started. The new universities are offering an alternative to the traditional single-subject specialisation of much academic training and the entrance requirements of professional associations have leap-frogged each other as more and more able young people have stayed on at school into the sixth form. New industries, such as the computer industry, have given rise to completely new jobs and hence to new qualifications.

It is small wonder that people are confused about the meaning of new qualifications and about their relationship with each other and with older forms of certification. This book is intended to help reduce the confusion by providing in a convenient form information about qualifications conferred in Great Britain. It is a directory of qualifications. As such, it does not attempt to assess qualifications nor to place qualifying associations in any order of importance or merit. As far as possible every qualification has been included but it is of course difficult to avoid some gaps and I should be

glad to hear from any qualifying body which I may have left out.

I am grateful to the Secretaries of all the Institutions and Associations included in the book for their prompt and courteous help; to Piers Burnett of André Deutsch Ltd for many practical suggestions; and to Philip Kogan and my husband, without whose help I could never have attempted to compile this book.

BARBARA PRIESTLEY

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How to Use this Book

It is hoped that the reader may find these prefatory notes on the different sections helpful in making the best use of this book.

The Index of Abbreviations and Designatory Letters is intended to act both as a key to the many abbreviations in common usage and as an index to their position in the text, where fuller details may be found.

Part 1 of the book is a short introduction to the various educational institutions mentioned in later Parts. It describes the organisation of secondary, further and higher education in England and Wales, Scotland and Northern Ireland with a brief description of the various types of institution to be found, their place in the system as a whole and the types of qualifications for which they provide courses of instruction.

Part 2 covers all those examinations for which the secondary schools enter their pupils (including the now defunct School Certificate). As they are almost entirely non-vocational in character these examinations are not mentioned in Part 6. England and Wales, Scotland and Northern Ireland are dealt with separately as each has a different examination structure.

Part 3 is intended as an introduction to the qualifications, usually technical or commercial in nature, which fall under the general heading of further education. These qualifications are usually gained after courses of study at one of the various classes of technical college, or through correspondence courses. This section also covers the degrees of the Council for National Academic Awards and their predecessor, the Diploma in Technology. Further details of the qualifications in this Part will be found in Part 6, where they are described under the relevant trade or profession.

Part 4 deals with all the qualifications awarded by the universities, including the Colleges of Advanced Technology which are, at the time of writing, awaiting confirmation of their university status. The degrees, diplomas and certificates are arranged under individual universities. Those qualifications which are of a vocational or professional nature are also described in Part 6. At the end of this section there is also a list of first degrees offered, listed by subject areas; this provides a quick guide to the universities at which first degree courses are available in any given subject.

Part 5 is a short explanatory section dealing with the various types of professional bodies and their membership. It includes a full list of study associations and learned societies which are not qualifying bodies, and are therefore not included in Part 6.

Part 6 describes the qualifications in each individual trade or profession. They are arranged in a standard order as follows:

- Membership of Professional Associations
- Degrees and Diplomas
- National Diplomas and Certificates
- College Associateships and Diplomas
- City and Guilds of London Institute Certificates
- Certificates of the Regional Examining Unions
- Other qualifications (including those peculiar to Scotland and Northern Ireland).

Wherever possible this pattern has been followed but in a few cases, such as Law or Medicine, the differing nature of the professional structure has dictated a departure from the norm.

The General Index provides a means of looking up any qualification, subject field, institution or examining body by rapid and easy reference.

Index of Abbreviations and Designatory Letters

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A.A.C.C.A. Associate of the Association of Certified and Corporate Accountants	389
A.A.DIPL. Diploma of the Architectural Association School of Architecture	425
A.A.DIPL. (PLANNING) Diploma of the Architectural Association School of Architecture in Town Planning	436
A.A.I. Associate of the Chartered Auctioneers' and Estate Agents' Institute	452
A.A.I.A. Associate of the Association of International Accountants	394
A.A.L.P.A. Associate of the Incorporated Society of Auctioneers and Landed Property Agents	453
A.A.P.S.W. Associate of the Association of Psychiatric Social Workers	874
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A.B.A.A. Associate of the British Association of Accountants and Auditors	393
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A.BLDG.S.I. Associate of the Building Surveyors Institute	507
A.B.Ps.S. Associate of the British Psychological Society	379
A.B.S. Associate of the Building Societies Institute	519
A.B.S.I. Associate of the British Boot and Shoe Institution	497
A.B.S.M.(GEN.MUS.) Associate of the Birmingham School of Music (General Music)	843
A.B.S.M.(TEACHER) Associate of the Birmingham School of Music (Teacher)	843
A.B.S.M.(T.T.D.) Associate of the Birmingham School of Music (Teacher Training Diploma)	1004
A.C.A. Associate of the Institute of Chartered Accountants in England and Wales; Associate of the Institute of Chartered Accountants in Northern Ireland	386 387
A.C.B.I. Associate of the Institute of Book-keepers (Alternative form: A.B.I.)	493
A.C.C.S. Associate of the Corporation of Secretaries	587
A.C.E.O.A. Associate of the Civic Entertainments Officers' Association	832

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A.C.G.I.	Associate of the City and Guilds of London Institute (at City and Guilds College, Imperial College, London)	269
A.CH.	Associate Member of the Institute of Chiropodists	540
A.CH.S.	Associate of the Society of Chiropodists	539
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A.C.I.	Associate of the Institute of Commerce	571
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A.C.I.I.	Associate of the Chartered Insurance Institute	748
A.C.I.L.A.	Associate of the Chartered Institute of Loss Adjusters	750
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A.COMM.A.	Associate of the Society of Commercial Accountants	397
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A.C.T.(BIRM.)	Associate of the Birmingham College of Advanced Technology	193
A.C.W.A.	Associate of the Institute of Cost and Works Accountants	392
A.D.C.M.	Archbishop of Canterbury's Diploma in Church Music	848
A.E.B.	Associated Examining Board for the General Certificate of Education	81
A.F.A.	Associate of the Faculty of Auditors	752
A.F.A.S.	Associate of the Faculty of Architects and Surveyors (Architects)	431
A.F.B.I.S.	Associate Fellow of the British Interplanetary Society	990
A.F.C.E.	Associate in Fuel Technology and Chemical Engineer- ing (University of Sheffield)	317
A.F.C.S.	Associate of the Faculty of Secretaries	588
AFFIL.R.S.H.	Affiliate of the Royal Society for the Promotion of Health	735
AFFILIATE I.M.M.	Affiliate of the Institution of Mining and Metallurgy	688
A.F.G.I.	Associate Fellow of the Grocers' Institute	961
A.F.INST.PET.	Associate Fellow of the Institute of Petroleum	722
A.F.R.AE.S.	Associate Fellow of the Royal Aeronautical Society	630
A.F.S.	Associate of the Faculty of Architects and Surveyors (Surveyors)	432
A.F.T.COM.	Associate of the Faculty of Teachers in Commerce	1025
A.G.I.	Associate of the Grocers' Institute	961
A.GLASS TECHNOL.	Associate in Glass Technology (University of Sheffield)	317
A.G.S.M.	Associate of the Guildhall School of Music and Drama	843
A.H.A.	Associate of the Institute of Hospital Administrators	742
A.H.-W.C.	Associate of Heriot-Watt College, Edinburgh	232
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A.I.A.C.	Associate of the Institute of Company Accountants	395
A.I.AGRIC.E.	Associate of the Institution of Agricultural Engineers	635
A.I.ARB.	Associate of the Institute of Arbitrators	421
A.I.A.S.	Associate of the Incorporated Association of Architects and Surveyors (Surveyors)	430

Index of Abbreviations and Designatory Letters

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A.I.B.E.	Associate of the Institute of Building Estimators	509
A.I.B.I.C.C.	Associate of the Incorporated British Institute of Certified Carpenters	1058
A.I.B.P.	Associate of the Institute of British Photographers	917
A.I.B.(SCOT.)	Associate of the Institute of Bankers in Scotland	479
A.I.CERAM.	Associate of the Institute of Ceramics	526
A.I.C.S.	Associate of the Institute of Chartered Shipbrokers	980
A.I.E.R.E.	Associate of the Institution of Electronic and Radio Engineers	659
A.I.H.E.	Associate Member of the Institute of Health Education	740
A.I.H.M.	Associate of the Institute of Housing Managers	745
A.I.HSG.	Associate of the Institute of Housing	746
A.I.INF.SC.	Associate of the Institute of Information Scientists	778
A.I.I.P.	Associate of the Institute of Incorporated Photographers	917
A.I.I.S.	Associate of the Institute of Industrial Supervisors	748
A.I.I.TECH.	Associate of the late Institute of Incorporated Work Study Technologists	1077
A.I.L.A.	Associate of the Institute of Landscape Architects	437
A.I.M.	Associate of the Institution of Metallurgists	823
A.I.M.ENT.	Associate of the Institute of Municipal Entertainment	831
A.I.M.L.T.	Associate of the Institute of Medical Laboratory Technology	757
A.I.M.S.W.	Associate of the Institute of Medical Social Workers	791
A.I.M.T.A.	Associate of the Institute of Municipal Treasurers and Accountants	390
A.I.MUN.B.M.	Associate of the Institute of Municipal Building Management	830
A.INST.A.A.	Associate of the Institute of Automobile Assessors	753
A.INST.L.EX.	Associate of the Institute of Legal Executives	774
A.INST.M.S.M.	Associate of the Institute of Marketing and Sales Management	403
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A.INST.P.A.	Associate of the Institute of Park and Recreation Administration	904
A.INST.P.S.	Associate of the Institute of Public Supplies	953
A.INST.R.	Associate of the Institute of Refrigeration	706
A.INST.T.A.	Associate of the Institute of Traffic Administration	1063
A.INST.W.	Associate of the Institute of Welding	1072
A.I.O.B.	Associate of the Institute of Builders	501
A.I.P.A.	Associate of the Chartered Institute of Patent Agents	908
A.I.P.H.E.	Associate of the Institution of Public Health Engineers	703

		Page No.
A.I.PLANT E.	Associate of the Institution of Plant Engineers	698
A.I.P.R.	Associate of the Institute of Public Relations	402
A.I.PROD.E.	Associate of the Institution of Production Engineers	699
A.I.Q.S.	Associate of the Institute of Quantity Surveyors	999
A.I.R.I.	Associate of the Institute of the Rubber Industry	972
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A.I.S.	Associate of the Institute of Statisticians	993
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A.I.STRUCT.E.	Associate of the Institution of Structural Engineers	710
A.I.STRUCT.E.(RET.)	Retired Associate of the Institution of Structural Engineers	710
A.I.T.A.	Associate of the Industrial Transport Association	1061
A.I.W.E.	Associate of the Institution of Water Engineers	712
A.I.W.M.A.	Associate Member of the Institute of Weights and Measures Administration	1070
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A.I.W.S.P.	Associate of the Institute of Work Study Practitioners	1077
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A.L.C.	Associate of the Leathersellers' College	773
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A.L.C.D.	Associate of the London College of Divinity	542
A.L.C.M.	Associate of the London College of Music	845
A.M.A.	Associate of the Museums Association	833
A.M.B.I.M.	Associate Member of the British Institute of Management	781
A.M.BRIT.I.R.E.	Associate Member of the late British Institute of Radio Engineers (now the Institution of Electronic and Radio Engineers)	see 658
A.M.H.C.I.	Associate Member of the Hotel and Catering Institute	520
A.M.C.S.T.	Associate of the Manchester College of Science and Technology	282
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A.M.I.A.	Associate Member of the late Institute of Almoners	see 791
A.M.I.AGR.E.	Associate Member of the Institution of Agricultural Engineers	635
A.M.I.B.F.	Associate Member of the Institute of British Foundrymen	719
A.M.I.BIOL.	Associate Member of the Institute of Biology	484
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A.M.I.CHEM.E.	Associate Member of the Institution of Chemical Engineers	641
A.M.I.C.M.	Associate Member of the Institute of Credit Management	592
A.M.I.E.D.	Associate Member of the Institution of Engineering Designers	650

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A.M.I.E.E.	Associate Member of the Institution of Electrical Engineers	651
A.M.I.E.I.	Associate Member of the Institution of Engineering Inspection	672
A.M.I.E.R.E.	Associate Member of the Institution of Electronic and Radio Engineers	659
A.M.I.Ex.	Associate Member of the Institute of Export	713
A.M.I.Gas E.	Associate Member of the Institution of Gas Engineers	665
A.M.I.H.V.E.	Associate Member of the Institution of Heating and Ventilating Engineers	667
A.M.I.I.S.	Associate Member of the Institute of Industrial Supervisors	748
A.M.I.I.Tech.	Associate Member of the late Institute of Incorporated Work Study Technologists	see 1077
A.M.I.Loco.E.	Associate Member of the Institution of Locomotive Engineers	675
A.M.I.M.A.	Associate Member of the Institutional Management Association	see 611
A.M.I.MAR.E.	Associate Member of the Institution of Marine Engineers	676
A.M.I.MECH.E.	Associate Member of the Institution of Mechanical Engineers	679
A.M.I.M.I.	Associate Member of the Institute of the Motor Industry	637
A.M.I.Min.E.	Associate Member of the Institution of Mining Engineers	686
A.M.I.M.M.	Associate Member of the Institution of Mining and Metallurgy	688
A.M.I.MUN.E.	Associate Member of the Institution of Municipal Engineers	694
A.M.INST.A.A.	Associate Member of the Institute of Automobile Assessors	753
A.M.INST.B.C.A.	Associate Member of the Institute of Burial and Cremation Administration	724
A.M.INST.B.E.	Associate Member of the Institute of British Engineers	624
A.M.INST.B.M.	Associate Member of the Institute of Baths Management	480
A.M.INST.F.	Associate Member of the Institute of Fuel	721
A.M.INST.H.E.	Associate Member of the Institution of Highway Engineers	673
A.M.INST.P.C.	Associate Member of the Institute of Public Cleansing	951
A.M.INST.PET.	Associate Member of the Institute of Petroleum	722
A.M.INST.R.	Associate Member of the Institute of Refrigeration	706
A.M.INST.S.P.	Associate Member of the Institute of Sewage Purification	741
A.M.INST.T.	Associate Member of the Institute of Transport	1059
A.M.INST.T.A.	Associate Member of the Institute of Traffic Administration	1062
A.M.INST.W.	Associate Member of the Institute of Welding	1072
A.M.INST.W.H.S.	Associate Member of the Institute of Works and Highways Superintendents	1078
A.M.INST.W.S.	Associate Member of the late Institute of Work Study	see 1077
A.M.I.O.P.	Associate Member of the Institute of Printing	934

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A.M.I.P.A.	Associate Member of the Institute of Practitioners in Advertising	400
A.M.I.P.H.E.	Associate Member of the Institution of Public Health Engineers	703
A.M.I.PLANT E.	Associate Member of the Institution of Plant Engineers	697
A.M.I.P.M.	Associate Member of the Institute of Personnel Management	910
A.M.I.PROD.E.	Associate Member of the Institution of Production Engineers	699
A.M.I.Q.	Associate Member of the Institute of Quarrying	956
A.M.I.R.S.E.	Associate Member of the Institution of Railway Signal Engineers	705
A.M.I.R.T.E.	Associate Member of the Institute of Road Transport Engineers	708
A.M.I.STRUCT.E.	Associate Member of the Institution of Structural Engineers	710
A.M.I.T.A.	Associate Member of the Industrial Transport Association	1061
A.M.I.T.E.	Associate Member of the Institution of Electrical and Electronics Technicians and Engineers	653
A.M.I.W.E.	Associate Member of the Institution of Water Engineers	712
A.M.I.W.M.	Associate Member of the Institution of Works Managers	783
A.M.J.INST.E.	Associate Member of the Junior Institution of Engineers	628
A.M.P.O.A.	Associate Member of the Purchasing Officers' Association	954
A.M.R.I.N.A.	Associate Member of the Royal Institution of Naval Architects	855
A.M.R.S.H.	Associate Member of the Royal Society for the Promotion of Health	735
A.M.S.E.	Associate Member of the Society of Engineers	625
A.M.T.P.I.	Associate Member of the Town Planning Institute	434
A.M.T.S.	Associate Member of the Television Society	377
A.MUS.L.C.M.	Associate in Music of the London College of Music	847
A.MUS.T.C.L.	Associate in Music of Trinity College of Music, London	846
A.MUS.T.S.C.	Associate in Music of the Tonic Sol-fa College of Music	848
A.M.W.I.	Associate Member of the Institute of Welfare Officers	1074
A.N.C.A.E.	Associate of the National College of Agricultural Engineering	636
A.N.I.H.	Associate of the National Institute of Hardware	963
A.N.C.R.T.	Associate of the National College of Rubber Technology	973
A.P.I.	Associate of the Plastics Institute	930
A.R.A.	Associate of the Royal Academy	374
A.R.A.D.	Associate of the Royal Academy of Dancing	595
A.R.A.M.	Associate of the Royal Academy of Music	595
A.R.C.A.	Associate of the Royal College of Art (Fine Art)	442
A.R.C.M.	Associate of the Royal College of Music	843
A.R.C.O.	Associate of the Royal College of Organists	846

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	Page No.
A.R.C.O.(C.H.M.) Associate of the Royal College of Organists (Choir-training Diploma)	846
A.R.C.S. Associate of the Royal College of Science, Imperial College, University of London	269
A.R.C.S.T. Associate of the Royal College of Science and Technology, Glasgow	323
A.R.C.U.K. Architects Registration Council of the United Kingdom	425
A.R.I.B.A. Associate of the Royal Institute of British Architects	426
A.R.I.C. Associate of the Royal Institute of Chemistry	529
A.R.I.C.S. Associate of the Royal Institution of Chartered Surveyors	996
A.R.I.P.H.H. Associate of the Royal Institute of Public Health and Hygiene	739
A.R.M.C.M. Associate of the Royal Manchester College of Music	843
A.R.M.C.M.(SCHOOL MUSIC) Associate of the Royal Manchester College of Music in School Music	843
A.R.P.S. Associate of the Royal Photographic Society	920
A.R.S.A. Associate of the Royal Society of Arts	381
A.R.S.H. Associate of the Royal Society of the Promotion of Health (superceded by A.M.R.S.H.)	735
A.R.S.M. Associate of the Royal School of Mines, Imperial College, University of London	269
A.R.V.A. Associate of the Rating and Valuation Association	1002
A.S.B. Associate of the Society of Beauticians	481
A.S.B., B.DIP. Associate of the Society of Beauticians, Beauty Specialist's Diploma	482
A.S.B., DIP.M.B.T. Associate of the Society of Beauticians, Diploma in Massage and Beauty Therapy	482
A.S.C.T. Associate of the Society of Commercial Teachers	1026
A.S.D.C. Associate of the Society of Dyers and Colourists	1054
A.S.E. Associate of the Society of Engineers	627
A.S.E.E. Association of Supervising Electrical Engineers	653
A.S.E.R.T. Associate of the Society of Electronic and Radio Technicians	661
A.S.F. Associate Member of the Society of Floristry	714
A.S.F. Associate of the Institute of Shipping and Forwarding Agents	981
ASSOC.BRIT.I.R.E. Associate of the late British Institution of Radio Engineers	see 659
ASSOCIATE I.E.E. Associate of the Institution of Electrical Engineers	651
ASSOC.I.GAS E. Associate of the Institution of Gas Engineers	665
ASSOC.I.H.V.E. Associate of the Institution of Heating and Ventilating Engineers	see 667
ASSOC.I.LOCO.E. Associate of the Institution of Locomotive Engineers	675
ASSOC.I.MECH.E. Associate of the Institution of Mechanical Engineers	679
ASSOC.I.M.I. Associate of the Institute of the Motor Industry	637
ASSOC.INST.P.C. Associate of the Institute of Public Cleansing	951
ASSOC.INST.T. Associate of the Institute of Transport	1058

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ASSOC.INST.W.H.S.	Associate of the Institute of Works and Highways Superintendents	1079
ASSOC.I.R.S.E.	Associate of the Institution of Railway Signal Engineers	705
ASSOC.R.C.A.T.S.	Ordinary Associate of the Royal College of Advanced Technology	305
A.T.A.I.	Associate Member of the Institute of Travel Agents	1064
A.T.C.	Art Teacher's Certificate	1014
A.T.C.L.	Associate of Trinity College of Music, London	844
A.T.D.	Art Teacher's Diploma	1014
A.T.I.	Associate of the Textile Institute	1051
A.T.S.C.	Associate of the Tonic Sol-fa College of Music	847
A.V.I.	Associate of the Valuers' Institution	1001
B.		
B.A.	Bachelor of Arts	171
B.A.(ADMIN.)	Bachelor of Arts (Administration), University of Manchester	281
B.A.(ECON.)	Bachelor of Arts (Economics)	348
B.AGR.	Bachelor of Agriculture, Queen's University, Belfast	186
B.A.(MUS.)	Bachelor of Arts (Music), University of Manchester	280
B.A.O.	Bachelor of Obstetrics, Queen's University, Belfast (and National University, Dublin)	186
B.ARCH.	Bachelor of Architecture	345
B.A.(S.S.)	Bachelor of Arts (Social Studies), University of Newcastle	286
B.A.(THEOL.)	Bachelor of Arts (Theology), University of Manchester	280
B.CH.	Bachelor of Surgery	357
B.CH.D.	Bachelor of Dental Surgery, University of Leeds	241
B.CHIR.	Bachelor of Surgery, University of Cambridge	207
B.C.L.	Bachelor of Civil Law, University of Oxford	299
B.COM.	Bachelor of Commerce	347
B.COM.SC.	Bachelor of Commercial Science, former degree of the University of Liverpool	248
B.D.	Bachelor of Divinity	364
B.D.S.	Bachelor of Dental Surgery	601
B.ED.	Bachelor of Education	349
B.ED.(SPEECH)	Bachelor of Education in Speech, University of Newcastle	286
B.ENG.	Bachelor of Engineering	349
B.ENG.(TECH.)	Bachelor of Engineering (Technology), Welsh College of Advanced Technology	337
B.H.S.I.	British Horse Society's Instructor's Certificate	746
B.I.M.	British Institute of Management	779
B.JUR.	Bachelor of Jurisprudence, University of Sheffield	313
B.L.	Barrister-at-Law	763

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B.LITT.	Bachelor of Letters	176
B.M., B.CH.	Conjoint degree of Bachelor of Medicine, Bachelor of Surgery, University of Oxford	298
B.MET.	Bachelor of Metallurgy, University of Sheffield	315
B.MUS.	Bachelor of Music	358
B.O.A.(DISP.)	Dispensing Diploma of the British Optical Association	900
B.PHARM.	Bachelor of Pharmacy	359
B.PHIL.	Bachelor of Philosophy	176
B.SC.	Bachelor of Science	171
B.SC.(AGR.)	Bachelor of Science in Agriculture, University of Aberdeen	179
B.SC.(AGRIC.)	Bachelor of Science (Agriculture), University of London	256
B.SC.(AGRIC.SC.)	Bachelor of Science (Agricultural Sciences), University of London	256
B.SC.(ARCH.)	Bachelor of Science (Architecture), University of Bristol	201
B.SC.(ARCHITECTURE)	Bachelor of Science (Architecture), University of London	253
B.SC., B.COM.	New conjoint degree of Bachelor of Science, Bachelor of Commerce, University of Birmingham	190
B.SC.(DOM.SC.)	Bachelor of Science (Domestic Science), University of Bristol	202
B.SC.(ECON.)	Bachelor of Science in Economics	348
B.SC.(ENG.)	Bachelor of Science (Engineering)	349
B.SC.(EST.MAN.)	Bachelor of Science (Estate Management), University of London	254
B.SC.(FOR.)	Bachelor of Science in Forestry, University of Aberdeen	179
B.SC.(HORT.)	Bachelor of Science (Horticulture), University of London	256
B.SC.(HOUSEHOLD SCIENCE)	Bachelor of Science (Household Science), University of London	256
B.SC.(NUTRITION)	Bachelor of Science (Nutrition), University of London	256
B.SC.(SOC.)	Bachelor of Science (Sociology), University of London	254
B.SC.(SOC.SCI.)	Bachelor of Science in the Social Sciences, University of Southampton	319
B.SC.TECH.	Bachelor of Technical Science, University of Sheffield	314
B.SC.(TECH.)	Bachelor of Science (Technology), Welsh College of Advanced Technology	337
B.SOC.SC.	Bachelor of Social Science, University of Birmingham	189
B.TECH.	Bachelor in Technology	196
B.VET.MED.	Bachelor of Veterinary Medicine, University of London	259
B.V.M. & S.	Bachelor of Veterinary Medicine and Surgery, University of Edinburgh	219
B.V.M.S.	Bachelor of Veterinary Medicine and Surgery, University of Glasgow	229
B.V.SC.	Bachelor of Veterinary Science	1066

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C.		
C.A.	Member of the Institute of Chartered Accountants of Scotland	386
C.A.C.T.M.	Central Advisory Council for the Ministry	543
C.A.T.	College of Advanced Technology	63
C.D.	Diploma in Co-operation of the Co-operative Union	966
C.ENG.	Chartered Engineer	624
CERT.DES.R.C.A.	Certificate of Designer of the Royal College of Art	442
CERT.ED.	Certificate in Education	177
CERT.R.A.S.	Royal Academy Schools Certificate	443
C.G.I.A.	Insignia Award of the City and Guilds of London Institute	130
C.G.L.I.	City and Guilds of London Institute	129
CH.B.	Bachelor of Surgery	793
C.H.D.	Diploma in Co-operation with Honours of the Co-operative Union	966
CH.M.	Master of Surgery	800
C.I.Gas E.	Companion of the Institution of Gas Engineers	665
C.I.H.	Certificate in Industrial Health, University of St. Andrews	814
C.I.MECH.E.	Companion of the Institution of Mechanical Engineers	679
C.INST.R.	Companion of the Institute of Refrigeration	706
C.INST.W.	Companion of the Institute of Welding	see 1071
C.L.TECH.(A.D.O.)	Diploma in Contact Lens Fitting of the Association of Dispensing Opticians	899
C.M.B.	Central Midwives Board	877
C.M.B.H.I.	Craft Member of the British Horological Institute	1068
C.M.D.	Diploma in Co-operative Management of the Co-operative Union	967
C.M.I.W.Sc.	Certificated Member of the Institute of Wood Science	1076
C.N.A.A.	Council for National Academic Awards	106
COMP.I.E.D.	Companion of the Institution of Engineering Designers	650
COMPANION I.E.E.	Companion of the Institution of Electrical Engineers	651
COMPANION I.E.R.E.	Companion of the Institution of Electronic and Radio Engineers	659
COMP.BRIT.I.R.E.	Companion of the late British Institution of Radio Engineers	see 659
COMP.I.E.D.	Companion of the Institution of Engineering Designers	650
COMP.I.W.M.	Companion of the Institution of Works Managers	784
C.P.A.	Chartered Patent Agent	907
C.S.D.	Diploma in Co-operative Secretaryship of the Co-operative Union	968
C.S.E.	Certificate of Secondary Education	84
C.T.	College of Technology	passim

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D.		
D.A.	Diploma in Anaesthetics	813
D.A.(DUNDEE)	Diploma in Architecture, Duncan of Jordanstone College of Art, Dundee	425
D.A.(EDIN.)	Diploma in Architecture, Edinburgh College of Art	425
D.A.(GLAS.)	Diploma in Architecture, University of Strathclyde	425
D.A.(MANC.)	Diploma of Associateship of the Manchester College of Art and Design	567
D.A.E.	Diploma in Advanced Engineering, Cranfield College of Aeronautics	633
D.A.P. & E.	Diploma in Applied Parasitology and Entomology, University of London	278
D.ARCH.(KINGSTON)	Diploma in Architecture, Kingston-upon-Thames School of Art	425
D.AU.E.	Diploma in Automobile Engineering, Cranfield College of Aeronautics	639
D.B.O.	Diploma of the British Orthoptic Board	901
D.C.	Diploma in Chiropractic, British Naturopathic Associ- ation	854
D.C.AE.	Diploma of the College of Aeronautics, Cranfield	633
D.CH.	Doctor of Surgery, University of Newcastle (Honorary)	289
D.C.H.	Diploma in Child Health	805
D.C.L.	Doctor of Civil Law	770
D.C.L.P.	Diploma in Advanced Contact Lens Practice, British Optical Association	897
D.C.M.T.	Diploma in Clinical Medicine of the Tropics	820
D.C.P., D.CLIN.PATH.	Diploma in Clinical Pathology, University of London	817
D.C.P.	Diploma in Clinical Psychology	948
D.D.	Doctor of Divinity	559
D.D.O.R.C.P.S.GLASG.	Diplomate in Dental Orthoptics of the Royal College of Physicians and Surgeons of Glasgow	607
D.D.O.R.F.P.S.GLASG.	Diplomate in Dental Orthoptics of the former Royal Faculty of Physicians and Surgeons of Glasgow see	607
D.D.S.	Doctor of Dental Surgery	605
D.D.SC.	Doctor of Dental Science	605
D.ENG.	Doctor of Engineering	249
DES.R.C.A.	Designer, Royal College of Art	442
D.G.A.	Diploma in Government Administration	829
D.HY.	Doctor of Hygiene, University of Newcastle	289
D.I.C.	Diploma of Membership of Imperial College of Science and Technology, University of London	269
D.I.H.	Diploma in Industrial Health	805
DIP.A.D.	Diploma in Art and Design	445-6

		Page No.
DIP.AGRIC.	Diploma in Agriculture, Universities of Cambridge and Wales	409
DIP.A.LING.	Diploma in Applied Linguistics	220
DIP.A.M.	Diploma in Applied Mechanics, University of Sheffield	317
DIP.ARCH.(ABDN.)	Diploma in Architecture, Robert Gordon's Technical College, Aberdeen	425
DIP.ARCH.(BIRM.)	Diploma in Architecture, Birmingham College of Arts and Crafts	425
DIP.ARCH.(BRIGHTON)	Diploma in Architecture, Brighton College of Art	425
DIP.ARCH.(CANTAB.)	Diploma in Architecture, University of Cambridge	425
DIP.ARCH.(CANTERBURY)	Diploma in Architecture, Canterbury College of Art	425
DIP.ARCH.(DUNELM.)	Diploma in Architecture, former King's College, Newcastle	425
DIP.ARCH.(HAMMERSMITH)	Diploma in Architecture, Hammersmith College of Art and Building	426
DIP.ARCH.(HULL)	Diploma in Architecture, Hull Regional College of Art	425
DIP.ARCH.(LEEDS)	Diploma in Architecture, Leeds College of Art	426
DIP.ARCH.(LEIC.)	Diploma in Architecture, Leicester College of Art and Design	426
DIP.ARCH.(L'POOL.)	Diploma in Architecture, University of Liverpool	425
DIP.ARCH.(MANCHESTER)	Diploma in Architecture, University of Manchester	425
DIP.ARCH.(N. POLY.)	Diploma in Architecture, Northern Polytechnic, London, N.7	426
DIP.ARCH.(NOTTM.)	Diploma in Architecture, University of Nottingham	425
DIP.ARCH.(OXFORD)	Diploma in Architecture, Oxford College of Technology	426
DIP.ARCH.(PORTSMOUTH)	Diploma in Architecture, Portsmouth College of Art	426
DIP.ARCH.R.W.A.	Diploma in Architecture, Royal West of England Academy School of Architecture (now part of Bristol University)	425
DIP.ARCH.(SHEFFIELD)	Diploma in Architecture, University of Sheffield	425
DIP.ARCH.(SOUTHEND)	Diploma in Architecture, Southend-on-Sea College of Technology	426
DIP.ARCH.(THE POLYTECHNIC)	Diploma in Architecture, The Polytechnic, London, W.1	426
DIP.ARCH.(U.C.L.)	Diploma in Architecture, University College, London	425
DIP.ARCH.(WALES)	Diploma in Architecture, Welsh College of Advanced Technology	425
DIP.BACT.	Diploma in Bacteriology, Universities of London and Manchester	814
DIP.C.D.	Diploma in Civic Design, University of Liverpool	436
DIP.E.	Diploma in Epilation, Society of Beauticians	482
DIP.ED., DIP.EDUC.	Diploma in Education	177

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		Page No.
DIP.F.D.	Diploma in Funeral Directing, National Association of Funeral Directors	724
DIP. IN DIETETICS	Diploma in Dietetics of the British Dietetic Association	610
DIP.INST.M.S.M.	Diploma in Marketing, Institute of Marketing and Sales Management	404
DIPL.ARCH.(U.C.L.)	Diploma in Architecture, University College, London	425
DIPL.ENG.	Diploma in Engineering, University of Liverpool	251
DIPL.P.A.	Diploma in Public Administration, University of Liverpool	251
DIP.MICROBIOL.	Diploma in Microbiology, University of Sheffield	317
DIP.M.I.E.S.	Diploma Member of the Illuminating Engineering Society	669
DIP.(MUS.ED.)R.S.A.M.	Diploma in Musical Education, Royal Scottish Academy of Music	842
DIP.N.A. & A.C.	Diploma in Numerical Analysis and Automatic Computing	289
DIP.NUM.MATHS.	Diploma in Numerical Mathematics, Queen's Univer- sity, Belfast	188
DIP.P.A.	Diploma of the Institute of Practitioners in Advertising	400
DIP.P.E.	Diploma in Physical Education	1019
DIP.SOC.STUDIES	Diploma in Social Studies, Queen's University, Belfast	188
DIP.T.E.	Diploma in Traffic Engineering, Institution of Highway Engineers	674
DIP.TECH.	Diploma of Technology	119
DIP.TECH.(ENG.)	Diploma of Technology (Engineering)	119
DIP.T.P., DIPL.T.P.	Diploma in Town Planning, Town and Country Planning	436
DIP.V.G.	Diploma in Vocational Guidance, Youth Employment Service Training Board	1081
DIPL.ENG.	Diploma in Engineering, University of Liverpool	251
DIPL.P.A.	Diploma in Public Administration, University of Liverpool	251
D.L.C.A.	Diploma of Loughborough College of Art	567
D.L.C.(ENG.)	Diploma of Loughborough College of Technology in Engineering	278
D.L.C.(SCI.)	Diploma of Loughborough College of Technology in Science	278
D.LIT.	Doctor of Literature	Passim
D.LITT.	Doctor of Letters	176
D.L.O.	Diploma in Laryngology and Otology	816
D.M.	Doctor of Medicine, University of Oxford	300
D.M.A.	Diploma in Municipal Administration	829
D.MET.	Doctor of Metallurgy, University of Sheffield	316
D.M.J.(CLIN.) or (PATH.)	Diploma in Medical Jurisprudence (Clinical) or (Pathological), Society of Apothecaries of London	815
D.M.R.	Diploma in Medical Radiology	818
D.M.R.(D.)	Diploma in Radiology (Radiodiagnosis)	818

		Page No.
D.M.R.(T.)	Diploma in Radiology (Radiotherapy)	819
D.M.S.A.	Diploma in Medical Services Administration, University of Edinburgh	222
D.MUS.	Doctor of Music	839
D.N.	Diploma in Naturopathy, British Naturopathic Association	854
D.N.	Diploma in Nutrition	816
D.O.	Diploma in Ophthalmology	816
D.O.	Diploma in Osteopathy, British Naturopathic Association	854
D.OBST.R.C.O.G.	Diploma in Obstetrics, Royal College of Obstetricians and Gynaecologists	813
D.O.HYG.	Diploma in Occupational Hygiene, University of London	815
D.OPT.	Diploma in Ophthalmics, Institute of Optical Science	895
D.ORTH.	Diploma in Orthoptics, British Optical Association	897
D.ORTH.R.C.S.ENG.	Diplomate in Orthodontics, Royal College of Surgeons of England	606
D.P.A.	Diploma in Public Administration	950
D.PATH.	Diploma in Pathology	817
D.P.D.U.ST.AND.	Diploma in Public Dentistry, University of St. Andrews	608
D.P.H.	Diploma in Public Health	818
D.PHIL.	Doctor of Philosophy	176
D.PHYS.MED.	Diploma in Physical Medicine	817
D.P.M.	Diploma in Psychological Medicine	805
D.R.C.	Diploma of the Royal College of Science and Technology, Glasgow	324
D.R.E.	Diploma in Remedial Electrolysis, Institute and Society of Practitioners in Electrolysis	483
D.R.S.A.M.	Diploma of the Royal Scottish Academy of Music	846
D.R.S.A.M.(TEACHER'S)	Teacher's Diploma of the Royal Scottish Academy of Music	843
D.S.A.	Diploma in Social Administration, University of Exeter	227
D.Sc.	Doctor of Science	176
D.Sc.(ECON.)	Doctor of Science (Economics) or in Economics	Passim
D.Sc.(ENG.)	Doctor of Science (Engineering), University of London	262
D.Sc.(SOC.SCI.)	Doctor of Science in the Social Sciences, University of Southampton	320
D.Sc.TECH.	Doctor of Technical Science, University of Sheffield	316
D.T.C.D.	Diploma in Tuberculosis and Chest Diseases, University of Wales	332
D.T.M. & H.	Diploma in Tropical Medicine and Hygiene	819
D.T.P.H.	Diploma in Tropical Public Health, University of London	820
D.T.V.M.	Diploma in Tropical Veterinary Medicine, University of Edinburgh	1068

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D.U.S.	Diploma of the University of Southampton	321
D.V.H.	Diploma in Veterinary Hygiene, University of Liverpool	251
D.V.M.	Doctor of Veterinary Medicine, University of Glasgow	230
D.V.M. & S.	Doctor of Veterinary Medicine and Surgery, University of Edinburgh	219
D.V.Sc.	Doctor of Veterinary Science	1067
D.V.S.M.	Diploma in Veterinary State Medicine, University of Edinburgh	222

E.

E.A.W.	Electrical Association for Women	615
Ed.B.	Bachelor of Education	1028
E.D.H.	Efficient Deck Hand	874
E.M.E.U.	East Midland Educational Union	132
E.S.N.	Educationally Subnormal	1037

F.

F.A.	Fellow of the Faculty of Auditors	393
F.A.C.C.A.	Fellow of the Association of Certified and Corporate Accountants	389
F.A.D.O.	Fellow of the Association of Dispensing Opticians	898
F.A.D.O.(HONS.)	Fellow of the Association of Dispensing Opticians with Honours Diploma	898
F.A.D.O.(HONS.)C.L.TECH.	Fellow of the Association of Dispensing Opticians with Honours Diploma and Diploma in Contact Lens Fitting	898
F.A.I.	Fellow of the Chartered Auctioneers' and Estate Agents' Institute	451
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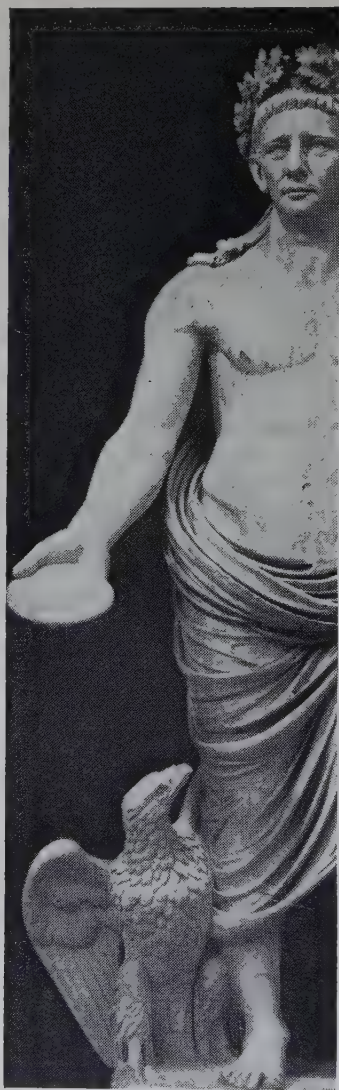
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HON.M.I.M.M.	Honorary Member of the Institution of Mining and Metallurgy	688
HON.M.I.MUN.E.	Honorary Member of the Institution of Municipal Engineers	see 694
HON.M.Inst.F.	Honorary Member of the Institute of Fuel	721
HON.M.INST.PET.	Honorary Member of the Institute of Petroleum	722
HON.M.INST.S.P.	Honorary Member of the Institute of Sewage Purification	741
HON.M.INST.W.	Honorary Member of the Institute of Welding	see 1071
HON.M.INST.W.H.S.	Honorary Member of the Institute of Works and Highways Superintendents	1079
HON.M.I.PLANT E.	Honorary Member of the Institution of Plant Engineers	see 696
HON.M.I.Q.	Honorary Member of the Institute of Quarrying	956
HON.M.I.R.S.E.	Honorary Member of the Institution of Railway Signal Engineers	705
HON.M.I.STRUCT.E.	Honorary Member of the Institution of Structural Engineers	710
HON.M.I.T.A.	Honorary Member of the Industrial Transport Association	1060
HON.M.P.S.	Honorary Member of the Pharmaceutical Society	see 912
HON.M.R.I.C.S.	Honorary Member of the Royal Institution of Chartered Surveyors	see 996
HON.M.R.I.N.A.	Honorary Member of the Royal Institution of Naval Architects	855
HON.M.S.R.	Honorary Member of the Society of Radiographers	see 957
HON.M.T.A.I.	Honorary Member of the Institute of Travel Agents	1064
HON.M.T.P.I.	Honorary Member of the Town Planning Institute	see 433
HON.R.A.M.	Honorary Member of the Royal Academy of Music	849
HONT.ASTOC.R.C.A.T.S.	Honours Associate of the Royal College of Advanced Technology, Salford	305
I.		
I.C.B.H.I.	Industrial Craft Member of the British Horological Institute	1069
I.C.E.	Institution of Civil Engineers	645
I.CHEM.E.	Institution of Chemical Engineers	641

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I.E.S.	Illuminating Engineering Society	669
I.M.A.	Institutional Management Association	611
I.MECH.E.	Institution of Mechanical Engineers	678
I.M.L.T.	Institute of Medical Laboratory Technology	756
INT.B.T.DIP.	International Beauty Teacher's Diploma of the Society of Beauticians	482
J.		
J.DIP.M.A.	Joint Diploma in Management Accounting Services	399
L.		
L.A.M.T.P.I.	Legal Associate Member of the Town Planning Institute	434
L.BLDG.S.I.	Licentiate of the Building Surveyors Institute	507
L.C.B.I.	Licentiate of the Institute of Book-keepers	494
L.CH.	Licentiate in Chiropody of the Institute of Chiropodists	540
L.CH.H.CH.D.	Licentiate in Chiropody of the Institute of Chiropodists (with Diploma in Higher Chiropodial Therapy)	540
L.C.I.L.A.	Licentiate of the Chartered Institute of Loss Adjusters	750
L.C.P.	Licentiate of the College of Preceptors	1023
L.C.S.T.	Licentiate of the College of Speech Therapists	991
L.D.S.	Licentiate in Dental Surgery	602
L.D.S.R.C.P.S.GLAS.	Licentiate in Dental Surgery of the Royal College of Physicians and Surgeons of Glasgow	604
L.D.S.R.C.S.EDIN.	Licentiate in Dental Surgery of the Royal College of Surgeons of Edinburgh	604
L.D.S.R.C.S.ENG.	Licentiate in Dental Surgery of the Royal College of Surgeons of England	603
L.D.S.R.C.S.I.	Licentiate in Dental Surgery of the Royal College of Surgeons in Ireland	609
L.D.S.R.F.P.S.GLASG.	Licentiate in Dental Surgery of the former Royal Faculty of Physicians and Surgeons of Glasgow	see 604
L.F.A.S.	Licentiate of the Faculty of Architects and Surveyors (Architects)	431
L.F.C.S.	Registered Graduate of the Faculty of Secretaries	588
L.F.S.	Licentiate of the Faculty of Architects and Surveyors (Surveyors)	432
L.G.S.M.	Licentiate of the Guildhall School of Music and Drama	843
L.I.B.D.	Licentiate of the Incorporated Institute of British Decorators and Interior Designers	441
L.I.B.S.T.	Licentiate of the Institute of British Surgical Tech- nicians	994
LIC.A.I.	Licentiate of the Chartered Auctioneers' and Estate Agents' Institute	452



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L.I.CERAM.	Licentiate of the Institute of Ceramics	527
LIC.R.V.A.	Licentiate of the Rating and Valuation Association	1002
LIC.THEOL.	Licentiate in Theology, University of St. Andrews	311
LIC.V.I.	Licentiate of the Valuers Institution	1001
LIFE F.I.M.L.T.	Life Fellow of the Institute of Medical Laboratory Technology	757
L.I.L.A.	Licentiate of the Institute of Landscape Architects	437
L.I.M.	Licentiate of the Institution of Metallurgists	824
L.I.MUN.B.M.	Licentiate of the Institute of Municipal Building Management	830
L.INST.P.A.	Licentiate of the Institute of Park and Recreation Administration	904
L.I.O.B.	Licentiate of the Institute of Builders	501
L.I.R.	Licentiate of the Institute of Population Registration	933
L.I.R.I.	Licentiate of the Institute of the Rubber Industry	972
LITT.D.	Doctor of Letters	176
L.TT.D.(ECON.)	Doctor of Letters in Economic Studies, University of Sheffield	316
LL.B.	Bachelor of Laws	767
L.L.C.M.	Licentiate of the London College of Music	845
L.L.C.M.(T.D.)	Licentiate of the London College of Music (Teacher's Diploma)	843
LL.D.	Doctor of Laws	769
LL.M.	Master of Laws	769
L.MED., L.CH.	Licentiate in Medicine, Licentiate in Surgery, Trinity College, Dublin	799
L.M.R.C.P.IREL.	Licentiate in Midwifery of the Royal College of Physicians of Ireland	799
L.M.R.C.S.IREL.	Licentiate in Midwifery of the Royal College of Surgeons of Ireland	799
L.M.R.S.H.	Licentiate Member of the Royal Society for the Promotion of Health	735
L.M.S.S.A.	Licentiate in Medicine and Surgery of the Society of Apothecaries of London	798
L.M.T.P.I.	Legal Member of the Town Planning Institute	433
L.MUS.L.C.M.	Licentiate in Music of the London College of Music	847
L.MUS.T.C.L.	Licentiate in Music, Trinity College of Music, London	846
L.MUS.T.S.C.	Licentiate in Music of the Tonic Sol-fa College of Music	848
L.N.R.C.T.	Licentiate of the National College of Rubber Technology	973
L.P.M.E.	Licentiate in Physiotherapy and Medical Electricity (of the Physiotherapists' Association)	929
L.R.A.M.	Licentiate of the Royal Academy of Music	842
L.R.C.P., M.R.C.S.	Licentiate of the Royal College of Physicians of London, Member of the Royal College of Surgeons of England	796

		Page No.
L.R.C.P.EDIN., L.R.C.S.EDIN., L.R.C.P.S.GLASG.	Conjoint Diplomas of Licentiate of the Royal College of Physicians of Edinburgh, Royal College of Surgeons of Edinburgh, Royal College of Physicians and Surgeons of Glasgow	797
L.R.C.P.IREL.	Licentiate of the Royal College of Physicians of Ireland	793
L.R.C.S.IREL.	Licentiate of the Royal College of Surgeons of Ireland	793
L.R.I.B.A.	Licentiate of the Royal Institute of British Architects	426
L.R.I.C.	Licentiate of the Royal Institute of Chemistry	529
L.R.S.M.	Licentiate of the Royal Schools of Music, London	844
L.S.E.	London School of Economics and Political Science	253
L.T.C.L.	Licentiate of Trinity College of Music, London	843
L.T.C.L.(C.M.T.)	Licentiate of Trinity College of Music, London (Class Music Teacher's Diploma)	843
L.TH.	Licentiate in Theology	564
L.T.I.	Licentiate of the Textile Institute	1052
L.T.S.C.	Licentiate of the Tonic Sol-fa College of Music	847
M.		
M.A.	Master of Arts	176
M.A.A.	Member of the Advertising Association	402
M.A.(ECON.)	Master of Arts in Economic and Social Studies, University of Manchester; Master of Arts in Econ- omic Studies, Universities of Newcastle and Sheffield	283 288 315
M.A.(ED.)	Master of Arts in Education, University of Southampton	320
M.AGR.	Master of Agriculture, Queen's University, Belfast	187
M.AGR.SC.	Master of Agricultural Science	409
M.A.O.	Master of Obstetrics, Queen's University, Belfast	187
M.A.O.T.	Member of the Association of Occupational Therapists	891
M.ARCH.	Master of Architecture	439
M.A.Y.C.	Methodist Association of Youth Clubs	550
M.B.A.I.E.	Member of the British Association of Industrial Editors	1050
M.B., B.CH.	Conjoint degree of Bachelor of Medicine, Bachelor of Surgery	793
M.B., B.CHIR.	Conjoint degree of Bachelor of Medicine, Bachelor of Surgery, University of Cambridge	207
M.B., B.S.	Conjoint degree of Bachelor of Medicine, Bachelor of Surgery, Universities of London and Newcastle	794
M.B., CH.B.	Conjoint degree of Bachelor of Medicine, Bachelor of Surgery	794
M.B.H.I.	Member of the British Horological Institute	1069
M.B.I.E.	Member of the British Institute of Embalmers	623
M.B.I.M.	Member of the British Institute of Management	781

		Page No.
M.BRIT.I.R.E.	Member of the late British Institution of Radio Engineers	see 658
M.C.D.	Master of Civic Design, University of Liverpool	248
M.C.E.O.A.	Member of the Civic Entertainments Officers' Association	831
M.CH.	Master of Surgery	800
M.CH.D.	Master of Dental Surgery, University of Leeds	242
M.CH.ORTH.	Master of Orthopaedic Surgery, University of Liverpool	249
M.CH.OTOL.	Master of Oto-Rhino-Laryngological Surgery, University of Liverpool	250
M.CH.S.	Member of the Society of Chiropodists	539
M.CHIR.	Master of Surgery, University of Cambridge	801
M.COM.	Master of Commerce	Passim
M.C.PATH.	Member of the College of Pathologists	811
M.C.S.P.	Member of the Chartered Society of Physiotherapists	928
M.C.S.T.	Member of the College of Speech Therapists	991
M.C.T.	Member of the College of Technologists	120
M.D.	Doctor of Medicine	800
M.D.S.	Master of Dental Surgery	605
M.ED.	Master of Education	1028
M.ENG.	Master of Engineering	Passim
M.F.PH.	Member of the Faculty of Physiotherapists	929
M.F.T.COM.	Member of the Faculty of Teachers in Commerce	1025
M.G.I.	Member of the Grocers' Institute	961
M.H.C.I.	Member of the Hotel and Catering Institute	520
M.I.AGR.E.	Member of the Institution of Agricultural Engineers	635
M.I.B.F.	Member of the Institute of British Foundrymen	718
M.I.BIOL.	Member of the Institute of Biology	484
M.I.C.E.	Member of the Institution of Civil Engineers	645
M.I.CHEM.E.	Member of the Institution of Chemical Engineers	641
M.I.C.W.	Member of the Institute of Clerks of Works of Great Britain Incorporated	508
M.I.E.D.	Member of the Institute of Engineering Designers	649
M.I.E.E.	Member of the Institution of Electrical Engineers	650
M.I.E.I.	Member of the Institution of Engineering Inspection	671
M.I.E.R.E.	Member of the Institution of Electronic and Radio Engineers	659
M.I.Ex.	Corporate Member of the Institute of Export	713
M.I.GAS E.	Member of the Institution of Gas Engineers	664
M.I.H.E.	Member of the Institute of Health Education	740

		Page No.
M.I.H.V.E.	Member of the Institution of Heating and Ventilating Engineers	666
M.I.INF.SC.	Member of the Institute of Information Scientists	777
M.I.I.S.	Member of the Institute of Industrial Supervisors	748
M.I.LOCO.E.	Member of the Institution of Locomotive Engineers	674
M.I.M.A.	Member of the Institutional Management Association	see 611
M.I.MAR.E.	Member of the Institute of Marine Engineers	675
M.I.MECH.E.	Member of the Institution of Mechanical Engineers	678
M.I.M.ENT.	Member of the Institute of Municipal Entertainment	831
M.I.M.I.	Member of the Institute of Motor Industry	637
M.I.MIN.E.	Member of the Institution of Mining Engineers	685
M.I.M.I.T.	Member of the Institute of Musical Instrument Technology	853
M.I.M.M.	Member of the Institution of Mining and Metallurgy	688
M.I.MUN.B.M.	Member of the Institute of Municipal Building Management	830
M.I.MUN.E.	Member of the Institution of Municipal Engineers	694
M.I.N.	Member of the Institute of Navigation	857
M.INST.A.A.	Member of the Institute of Automobile Assessors	753
M.INST.B.C.A.	Member of the Institute of Burial and Cremation Administration	724
M.INST.B.E.	Member of the Institute of British Engineers	624
M.INST.B.M.	Member of the Institute of Baths Management	480
M.INST.F.	Member of the Institute of Fuel	721
M.INST.H.E.	Member of the Institution of Highway Engineers	673
M.INST.M.S.M.	Member of the Institute of Marketing and Sales Management	403
M.INST.P.C.	Member of the Institute of Public Cleansing	951
M.INST.PET.	Member of the Institute of Petroleum	722
M.INST.PKG.	Member of the Institute of Packaging	903
M.INST.P.S.	Member of the Institute of Public Supplies	953
M.INST.R.	Member of the Institute of Refrigeration	706
M.INST.S.P.	Member of the Institute of Sewage Purification	741
M.INST.T.	Member of the Institute of Transport	1058
M.INST.T.A.	Member of the Institute of Traffic Administration	1062
M.INST.W.	Member of the Institute of Welding	1071
M.INST.W.H.S.	Member of the Institute of Works and Highways Superintendents	1078
M.INST.W.S.	Member of the late Institute of Work Study	1077
M.I.O.M.(DIP.)	Member of the Institute of Office Management	782
M.I.P.A.	Member of the Institute of Practitioners in Advertising	400
M.I.P.H.E.	Member of the Institution of Public Health Engineers	702
M.I.PLANT E.	Member of the Institution of Plant Engineers	697
M.I.P.M.	Member of the Institution of Personnel Management	909
M.I.P.R.	Member of the Institute of Public Relations	402
M.I.PROD.E.	Member of the Institution of Production Engineers	698
M.I.Q.	Member of the Institute of Quarrying	956

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		Page No.
M.I.R.	Member of the Institute of Population Registration	933
M.I.R.S.E.	Member of the Institution of Railway Signal Engineers	704
M.I.R.T.E.	Member of the Institute of Road Transport Engineers	708
M.I.STRUCT.E.	Member of the Institution of Structural Engineers	709
M.I.STRUCT.E.(RET.)	Retired Member of the Institution of Structural Engineers	709
M.I.T.	Member of the Institute of Trichologists	732
M.I.T.A.	Member of the Industrial Transport Association	1061
M.I.T.E.	Member of the Institution of Electrical and Electronics Technicians and Engineers	653
M.I.W.E.	Member of the Institution of Water Engineers	712
M.I.W.M.	Member of the Institution of Works Managers	783
M.I.W.M.A.	Member of the Institute of Weights and Measures Administration	1070
M.I.Y.E.O.	Member of the Institute of Youth Employment Officers	1080
M.J.INST.E.	Member of the Junior Institution of Engineers	628
M.LITT.	Master of Letters	208
M.MET.	Master of Metallurgy, University of Sheffield	315
M.M.G.I.	Master Member of the Grocers' Institute	961
M.MUS.	Master of Music	838
M.MUS.(R.C.M.)	Master of Music, Royal College of Music	840
M.MUS.T.S.C.	Master of Music, Tonic Sol-fa College of Music	840
M.N.I.H.(DIP.) or M.N.I.H.	Member of the National Institute of Hardware	963
M.PHARM.	Master of Pharmacy	915
M.PHIL.	Master of Philosophy	Passim
M.PHYS.A.	Member of the Physiotherapists' Association	929
M.P.O.A.	Member of the Purchasing Officers Association	954
M.P.S.	Member of the Pharmaceutical Society of Great Britain or Northern Ireland	912
M.P.S.	Member of the Philological Society	378
M.P.S.	Member of the Physical Society	see 922
M.Q.B.	Mining Qualifications Board	693
M.RAD.(D.) or (T.)	Master of Radiology (Radiodiagnosis) or (Radiotherapy), University of Liverpool	250
M.R.C.O.G.	Member of the Royal College of Obstetricians and Gynaecologists	811
M.R.C.P.(EDIN.)	Member of the Royal College of Physicians of Edinburgh	803
M.R.C.P.GLASG.	Member of the Royal College of Physicians of Glasgow	804
M.R.C.P.I.	Member of the Royal College of Physicians of Ireland	810
M.R.C.P.LOND.	Member of the Royal College of Physicians of London	805
M.R.C.V.S.	Member of the Royal College of Veterinary Surgeons	1066
M.R.G.S.	Member of the Royal Geographical Society	377
M.R.I.N.A.	Member of the Royal Institution of Naval Architects	855

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Clerical Officers; Grade 10 Officers in the Diplomatic Service; Scientific Assistants; Cartographical Draughtsmen; Plans Assistants; Postal and Telegraph Officers; Assistant Preventive Officers in the Customs Waterguard Service.

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M.R.I.P.H.H.	Member of the Royal Institute of Public Health and Hygiene	739
M.R.O.	Member of the Register of Osteopaths	902
M.R.SAN.A.	Member of the Royal Sanitary Association of Scotland	738
M.R.S.H.	Member of the Royal Society for the Promotion of Health	735
M.S.	Master of Surgery	802
M.S.(DENT.)	Master of Surgery (Dental Surgery), University of London	608
M.S.A.O.T.	Member of the Scottish Association of Occupational Therapists	892
M.S.B.	Member of the Society of Beauticians	481
M.S.B., INT.B.DIP.	Member of the Society of Beauticians International Beautician's Diploma	482
M.Sc.	Master of Science	176
M.Sc.ECON.	Master of Science in Economics, University of Wales	331
M.Sc.(ECON.)	Master of Science in Economics	passim
M.Sc.(ENG.)	Master of Science (Engineering), University of London	262
M.Sc.(EST.MAN.)	Master of Science (Estate Management), University of London	262
M.Sc.(SOC.SCI.)	Master of Science in the Social Sciences, University of Southampton	320
M.Sc.(SOC.SCI.)	Master of Science (Social Science), University of Edinburgh	219
M.Sc.TECH.	Master of Technical Science, University of Sheffield	315
M.S.E.	Member of the Society of Engineers	625
M.S.E.R.T.	Member of the Society of Electronic and Radio Technicians	660
M.S.F.	Member of the Society of Floristry	714
M.S.H.M.	Member of the Society of Housing Managers	746
M.Soc.Sc.	Master of Social Science, University of Birmingham	190
M.S.R.G.	Member of the Society of Remedial Gymnasts	959
M.S.R.(R.)	Member of the Society of Radiographers (Radiography)	958
M.S.R.(T.)	Member of the Society of Radiographers (Radiotherapy)	958
M.T.A.I.	Member of the Institute of Travel Agents	1064
M.Th.	Master of Theology	559
M.THEOL.	Master of Theology, University of Edinburgh	219
M.T.P.I.	Member of the Town Planning Institute	433
M.T.S.C.	Member of the Tonic Sol-fa College	847
Mus.B., Mus.BACH.	Bachelor of Music	839
Mus.D., Mus.DOC.	Doctor of Music	839
Mus.M.	Master of Music	839
M.VET.MED.	Master of Veterinary Medicine, University of London	262

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M.V.S.	Master of Veterinary Surgery, University of Glasgow	1067
M.V.Sc.	Master of Veterinary Science, University of Liverpool	1067
M.W.I.	Member of the Institute of Welfare Officers	1073
N.		
N.C.T.A.	National Council for Technological Awards	119
N.C.T.D.	National College of Teachers of the Deaf	1048
N.C.T.E.C.	Northern Counties Technical Examinations Council	133
N.D.A.	National Diploma in Agriculture	411
N.D.AGR.E.	National Diploma in Agricultural Engineering	636
N.D.D.	National Diploma in Dairying	411
N.D.D.	National Diploma in Design	445
N.D.F.	National Diploma in Forestry	716
N.D.H.	National Diploma in Horticulture	411
N.D.P.	National Diploma in Poultry Husbandry	411
N.D.T.	National Diploma in the Science and Practice of Turf- culture and Sports Ground Management	905
N.R.D.C.	National Retail Distribution Certificate	152
N.U.J.M.B.	Northern Universities Joint Matriculation Board	82
O.		
O.N.C.	Ordinary National Certificate	128
O.N.D.	Ordinary National Diploma	128
P.		
P.A.I.W.E.	Professional Associate of the Institution of Water Engineers	712
P.B.A.	President of the British Academy	see 374
P.F.A.S.	President of the Faculty of Architects and Surveyors	433
PH.C.	Pharmaceutical Chemist	913
PH.D.	Doctor of Philosophy	176
PH.D.(ED.)	Doctor of Philosophy (Education), University of Birmingham	1028
P.P.F.A.S.	Past President of the Faculty of Architects and Surveyors	433
P.P.I.O.B.	Past President of the Institute of Builders	see 500
P.S.DIP.	Private Secretary's Diploma, London Chamber of Commerce	161

Q.

Q.A.L.A.S.	Qualified Associate of the Chartered Land Agents' Society	456
Q.C.	Queen's Counsel	764

R.

R.A.	Academician of the Royal Academy	374
R.A.D.	Royal Academy of Dancing	594
R.A.D.A.	Royal Academy of Dramatic Art	620
REG.ARCH.	Registered Architect	see 425
R.F.N.	Registered Fever Nurse	880
R.G.N.	Registered General Nurse (Scotland)	879
R.I.C.S.	Royal Institution of Chartered Surveyors	996
R.M.N.	Registered Mental Nurse	879
R.N.M.D.	Registered Nurse for Mental Defectives (Scotland)	880
R.N.M.S.	Registered Nurse for the Mentally Subnormal	879
R.S.C.N.	Registered Sick Children's Nurse	878
R.T.J.C.	Retail Trades Junior Certificate	970
R.W.A.	Royal West of England Academy	425

S.

Sc.D.	Doctor of Science, University of Cambridge	208
S.C.E.	Scottish Certificate of Education	88
S.C.M.	State Certified Midwife	882
S.D.A.	Scottish Diploma in Agriculture	417
S.D.D.	Scottish Diploma in Dairying	418
S.D.H.	Scottish Diploma in Horticulture	418
S.D.P.	Scottish Diploma in Poultry Husbandry	418
S.E.A.N.	State Enrolled Assistant Nurse	881
S.E.N.	State Enrolled Nurse	881
S.I.LOCO.E.	Student of the Institution of Locomotive Engineers	675
S.I.MECH.E.	Student of the Institution of Mechanical Engineers	679
S.L.C.	Scottish Leaving Certificate	88
S.M.H.D.	Higher Diploma of the Worshipful Company of Spectacle Makers	896
S.M.C.(DISP.)	Dispensing Certificate of the Worshipful Company of Spectacle Makers	900
S.M.INST.B.M.	Student Member of the Institute of Baths Management	480
S.M.S.A.	Senior Award of the Worshipful Company of Spectacle Makers	896

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S.O.F.DIP.	Full Member of the Society of Floristry	714
S.R.D.	State Registered Dietitian	609
S.R.N.	State Registered Nurse	878
S.T.M.C.	School Teacher's Music Certificate, Tonic Sol-fa College of Music	847
STUDENT I.E.E.	Student of the Institution of Electrical Engineers	651
STUDENT I.M.M.	Student Member of the Institution of Mining and Metallurgy	688
STUDENT I.R.S.E.	Student of the Institution of Railway Signal Engineers	705
STUDENT I.T.A.	Student of the Industrial Transport Association	1061
STUD.I.E.D.	Student of the Institute of Engineering Designers	650
STUD.I.GAS E.	Student of the Institution of Gas Engineers	665
STUD.INST.PET.	Student Member of the Institute of Petroleum	722
STUD.INST.R.	Student of the Institute of Refrigeration	706
STUD.INST.W.H.S.	Student of the Institute of Works and Highways Superintendents	1079
STUD.I.P.H.E.	Student of the Institution of Public Health Engineers	703
STUD.S.E.	Student of the Society of Engineers	627
STUD.T.A.I.	Student Member of the Institute of Travel Agents	1065

T.

T.C.	Technical College	passim
T.M.A.O.T.	Teacher's Diploma of the Association of Occupational Therapists	892
Tn.I.O.B.	Technical Member of the Institute of Builders	502

U.

U.C.	University College	passim
U.D.D.	Ulster Diploma in Dairying	419
U.D.P.	Ulster Diploma in Poultry Husbandry	419
U.E.I.	Union of Educational Institutions	132
U.G.C.	University Grants Committee	72
U.L.C.I.	Union of Lancashire and Cheshire Institutes	131

V.

VET.M.B.	Bachelor of Veterinary Medicine, University of Cambridge	207
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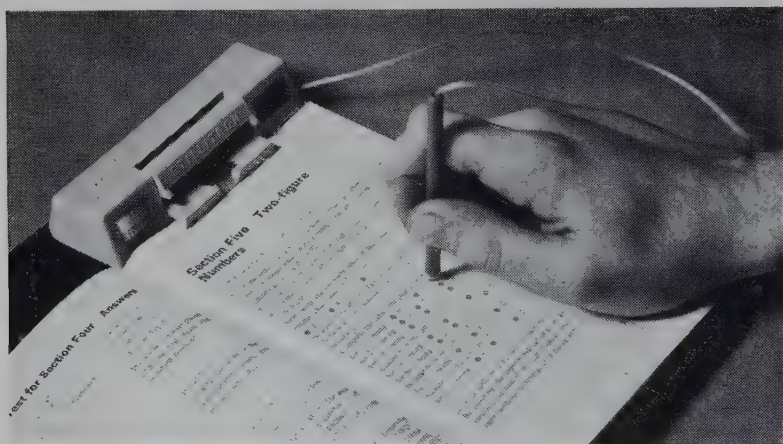
Part I

Teaching Establishments

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Teaching Establishments

The statutory responsibility for the provision of education in the United Kingdom is shared by the Department of Education and Science and the local education authorities of England and Wales, the Scottish Education Department and the education authorities of Scotland, and the Ministry of Education for Northern Ireland and the education authorities of Northern Ireland. In the United Kingdom education is divided into three stages:

Primary education (up to the age of about 11 and 12 in Scotland);

Secondary education (from the age of 11 until the pupil leaves school); and

Further education (all education and training provided after full-time schooling ends).

This chapter briefly describes (1) secondary schools, see below, (2) further education establishments, page 62, (3) higher education establishments (universities and colleges of education), page 66.

SECONDARY SCHOOLS

ENGLAND AND WALES

There are 5,894 maintained secondary schools, containing 2,830,000 pupils* between the ages of 11 and 19, in England and Wales, 4,951 of them established and run by local education authorities — the county councils and county boroughs. 230 schools, containing 80,800 pupils, are provided by the Church of England and maintained wholly or partly by local education authorities; 461 Roman Catholic schools, containing 185,300 pupils, and 252 schools established by other churches and bodies, containing 125,900 pupils,

*Department of Education and Science *Statistics of Education, Part One*, 1965

are in the same position. They are called 'voluntary controlled' or 'voluntary aided' schools.

Pupils transfer from primary to secondary schools at the age of 11 and must stay at school until after their fifteenth birthday. The minimum school-leaving age will be raised to 16 in the school-year 1970-71. Pupils intending to go on to take some form of higher education usually stay at school until they are 18, but a growing number of less able pupils remain at school beyond the minimum age in order to improve their qualifications and education. No pupil in a maintained school is permitted to take a public examination before his fifth year of secondary education (i.e. when he is in the fifth form and between the ages of 15 and 16). The first public examinations are for the Certificate of Secondary Education (C.S.E.) and the General Certificate of Education (G.C.E.) Ordinary level. The second public examination is for the General Certificate of Education Advanced level.

After the Education Act of 1944 most local education authorities organised their secondary schools on a tripartite system, consisting of **grammar, technical and modern schools**. Pupils were allotted to one school or the other after a selection test (which came to be known as the 'eleven plus' although the tests were usually taken before the age of 11) held in the senior form of their primary school. It was then generally thought that secondary education should be so organised as to provide for three categories of ability (for the most academically able grammar schools on the traditional English pattern, for the more technically minded technical schools and for the other secondary modern schools). The secondary modern schools, to which the majority of eleven-year-olds go, were to be regarded as experimental and were given the task of devising courses enabling the pupil to prove himself in ways other than the academic. However, it has been more and more widely recognised that children do not fit into educational compartments. Schools of different types have been set up to provide a greater choice of courses. At present the main types of school are:

3,906 secondary modern schools, which provide a wide range of courses, mainly non-academic but also for G.C.E., at least to school-leaving age (and beyond for a growing number of pupils who stay on at school voluntarily after the age of 15). These schools contain 1,640,500 pupils, 58% of all pupils in maintained secondary schools. They contain 63.5% of all pupils in maintained secondary schools who are in compulsory full-time education.

1,298 grammar and grammar-technical schools, which provide academic courses up to G.C.E. Ordinary and

Advanced levels (taken generally at 16 and 18 respectively). Advanced level examinations are taken by pupils in the senior classes, which are called the 'sixth form'. These schools contain 726,000 pupils, 25% of all pupils in maintained secondary schools. They contain 19.1% of all pupils in maintained secondary schools who are in compulsory full-time education.

186 technical schools, which also provide courses to fifth and sixth form level, but with the emphasis on scientific rather than arts subjects. These schools contain 88,500 secondary pupils, 3.1% of all pupils in maintained secondary schools. They contain 2.7% of all pupils in maintained secondary schools who are in compulsory full-time education.

195 comprehensive schools, which provide in a single, usually large, organisation courses for secondary pupils of all levels of ability and with aptitudes for all kinds of subject. These schools contain 199,200 pupils, 7% of all the pupils in maintained secondary schools. They contain 6.7% of all pupils in maintained secondary schools who are in compulsory full-time education. Maintained secondary education has been slowly moving towards a comprehensive pattern. The Government has asked local education authorities to adopt the comprehensive system, but it is accepted that reorganisation must take many years to complete.

In some areas, local education authorities created **bilateral** and **multilateral schools**, which provide two or three of the main types of secondary education in separately organised streams (i.e. modern-grammar, modern-technical or grammar-technical). Multilateral schools provide all three types of education in separately organised streams. There are 69 of these schools, containing 47,900 pupils.

There are also 240 secondary schools which do not fit into any of these categories and are described in Department of Education and Science Statistics as 'other secondary'. They contain 127,400 pupils, 4% of all the pupils in maintained secondary schools.

As well as those 5,894 schools maintained by local education authorities and 745 maintained special schools for handicapped pupils, there are two other groups of secondary schools. First, there are 179 **direct grant grammar schools**, which receive grants direct from the Department of Education and Science. They are mainly old grammar schools, such as Manchester and Bristol

Grammar Schools, established before county grammar schools whose development dates effectively from the Education Act of 1902. In return for their grant, they must offer at least a quarter of their places free to pupils from maintained primary schools who are selected by the schools and the local education authorities and paid for by the latter. Many local education authorities have supplemented their own grammar school provision by taking up places at direct grant schools and about 60% of all the places in these schools are in fact taken up by the authorities. Other pupils pay fees. Some of the schools offer boarding places. The schools, many of which are denominational and are run by religious orders, contain 113,250 pupils. Fifty-seven of them are represented on the Headmasters' Conference and are, in some respects, more like 'public' than grammar schools.

Secondly, there are a number of **private or 'independent' primary and secondary schools**, some of which, such as Eton, Harrow and Westminster, form the group known as '**public schools**'. They are mainly boarding schools and get their income from fees, private funds and endowments. Some local education authorities take up a few boarding places for pupils whose circumstances necessitate it. All these schools must be registered with and inspected by the Department of Education and Science. If a school satisfies the Department in all respects—staffing, accommodation, etc.—it is 'recognised as efficient'. 2,205 independent schools are simply registered and 1,550 are recognised as efficient. They contain between them 470,384 pupils, 162,710 in registered schools and 307,674 in recognised schools. There are 299 recognised secondary schools (75,700 pupils) and 229 registered ones (19,700 pupils). The 'public schools' are those secondary schools whose heads are members of the Headmasters' Conference.

SCOTLAND

There are three categories of schools in Scotland—'public schools', equivalent to maintained schools in England and Wales, managed by education authorities, who receive grants from the Secretary of State for Scotland; 'grant-aided schools' conducted by managers other than education authorities, who receive grants directly from the Secretary of State; and independent schools conducted by managers without the aid of grants.

The 726 public and grant-aided secondary schools, which contain 287,685 pupils, are of two main types. **Junior secondary schools**, which correspond with secondary modern schools in England and Wales, provide three-year courses for pupils who intend to leave

school at 15, which is the minimum leaving age. (The transfer from primary to secondary education takes place in Scotland at 12+, not at 11+ as in England and Wales.) **Senior secondary schools**, like grammar schools south of the border, offer longer courses. Many secondary schools are comprehensive and offer both types of course.

The practice has always been to provide a broad general education in the senior secondary schools between the ages of 12 and 17—the latter being the age of admission to Scottish universities—and to provide specialised courses for only those few students who wanted them. The universities, whose first honours degree courses last four years as against three in most English and Welsh universities, were left the task of specialisation. The work done in the English upper sixth form is very largely done in Scotland during the first year of the university course.

The first public examination is for the Ordinary Grade of the Scottish Certificate of Education (S.C.E.), taken at the age of 16. The second examination is for the Higher Grade, usually taken at the age of 17. It is now proposed to introduce a new examination, related to sixth form work and comparable with G.C.E. 'A' level, at a standard above that of Higher Grade.

NORTHERN IRELAND

The age of transfer from primary to secondary education is, as in England and Wales, 11+. Some pupils are allocated to secondary schools as a result of their performance in the Qualifying Examination, which is organised by the Northern Ireland Ministry of Education. But most pupils are transferred to secondary intermediate schools (corresponding to secondary modern schools) without a test.

Most schools are maintained by the eight local education authorities, six county councils and two county boroughs.

There are three kinds of secondary school:

81 grammar schools (containing 36,000 pupils) provide an academic curriculum up to the age of 17 or 18. They charge fees, but more than 80% of their pupils hold local education authority scholarships covering the whole or greater part of their fees.

28 technical intermediate schools (containing 3,600 pupils). These are free schools, conducted in Institutes of Further Education, which offer a course of four or more years less academic than that provided in grammar schools.

129 secondary intermediate schools (containing 58,100 pupils). These are free secondary schools which provide a four-year course for pupils between the ages of 11 and 15, the first two years of which are general and the latter two more specialised as a preparation for vocational training at a later stage.

There is also a small group of 14 independent schools in Northern Ireland. Not all of these are secondary schools.

FURTHER EDUCATION ESTABLISHMENTS

The system of further or technical education includes many different kinds of institution and leads to qualifications at several levels. Technical institutions vary from large regional colleges of technology in England and Wales and Central Institutions in Scotland and Northern Ireland to small local technical colleges. Nearly all further education establishments are maintained by local education authorities. The senior technological institutions, the Colleges of Advanced Technology, are acquiring university status following the Robbins Report on Higher Education.

Students may begin technical college courses at 15 (the present minimum school-leaving age) without G.C.E. or the equivalent, at 16 with or without G.C.E. or the equivalent and at 18 with G.C.E. or the equivalent. Most students want some form of specialised or vocational qualification; about 80% of all technical education courses are vocational. Courses are either part-time or full-time, and although some students go to college as a condition of their employment, because, for example, they are apprentices, most go voluntarily. Advanced technical education is an alternative route to professional qualifications for the able sixth former.

The principal technical institutions have three roles as higher education establishments:

- (i) they provide full-time and sandwich courses for students of university quality who are attracted by the more vocational traditions of the colleges and are more interested in applying knowledge to the solution of problems than in seeking knowledge for its own sake. The Council for National Academic Awards provides degrees at the end of college courses comparable in standard and quality with a university course;

- (ii) they provide full-time and sandwich courses which are of a less demanding standard than degree level courses for students likely to become high-level technicians and middle managers who support the scientists, technologists and top managers; and
- (iii) they provide part-time courses for students who need advanced courses either to supplement other qualifications or because, for some reason or other, they have missed the full-time route.

ENGLAND AND WALES

In 1956 four major categories of college were defined in order to facilitate a more reasonable distribution of resources in further education. These were **Colleges of Advanced Technology (C.A.T.'s)**, **regional colleges**, **area colleges** and **local colleges**. The system was intended to be flexible so that a college could, if approved, move from one category to another. In fact, the **Colleges of Advanced Technology** are in the process of acquiring university status; they are described on page 73. In the remaining categories there are:

25 regional colleges. These colleges provide for a substantial amount of advanced study, especially by means of full-time and sandwich courses, for students from several contiguous local education authority areas. Ranking in importance after the Colleges of Advanced Technology they were designated as the main centres in which full-time and sandwich courses of first degree level were expected to grow. About two-thirds of their full-time students and a quarter of their part-time students take advanced courses, some leading to the degrees awarded by the Council for National Academic Awards and to degrees of London University. The colleges are not wholly industry-orientated and offer courses in business studies, architecture and other special fields. The governing bodies of the colleges include representatives of local education authorities from the areas concerned. The colleges are:

Brighton College of Technology, Richmond Terrace, Brighton, 7, Sussex; Borough Polytechnic, Borough Road, London, S.E.1; Brixton School of Building, Ferndale Road, London, S.W.4; Lanchester College of Technology, Priory Street, Coventry, Warwickshire; Glamorgan College of Technology, Treforest, Glamorgan; Hatfield

College of Technology, Hatfield, Hertfordshire; Huddersfield College of Technology, Huddersfield, Yorkshire; Kingston College of Technology, Fassett Road, Kingston-upon-Thames, Surrey; Leeds College of Technology, Calverley Street, Leeds, 1, Yorkshire; Leicester College of Technology and Commerce, The Newarke, Leicester; City of Liverpool College of Building, Clarence Street, Liverpool, 3; City of Liverpool College of Technology, Byrom Street, Liverpool, 4; Northern Polytechnic, Holloway Road, London, N.7; North Staffordshire College of Technology, College Road, Stoke-on-Trent, Staffordshire; Nottingham and District Technical College, Burton Street, Nottingham; Plymouth College of Technology, Tavistock Road, Plymouth, Devon; Portsmouth College of Technology, Park Road, Portsmouth, Hampshire; Rugby College of Engineering Technology, Eastlands, Rugby, Warwickshire; Rutherford College of Technology, Newcastle upon Tyne, 1; Sir John Cass College, Jewry Street, London, E.C.3; South-East Essex Technical College and School of Art, Dagenham, Essex; Sunderland Technical College, Green Terrace, Sunderland, Durham; The Polytechnic, Regent Street, London, W.1; West Ham College of Technology, Romford Road, London, E.15; Woolwich Polytechnic, Thomas Street, London, S.E.18.

497 area and local colleges. These technical colleges, colleges of commerce and further education provide a substantial number of day courses. Area colleges do some advanced work, but less than regional colleges. The work in local colleges is non-advanced as it goes no further than Ordinary National Certificate (O.N.C.) or G.C.E. 'A' level.

In addition there are:

38 farm institutes. These establishments undertake mainly non-advanced courses in agricultural subjects.

163 colleges of art. (Courses at colleges of art are described in Part 6 on page 445.)

SCOTLAND

In Scotland nearly all full-time advanced education is conducted in 15 colleges called **Central Institutions**, which are financed by the Secretary of State for Scotland. Central Institutions provide courses in technology, art, domestic science, music, commercial subjects or agriculture. The three Agricultural Institutions are

financed through the Department of Agriculture and Fisheries for Scotland. They are:

North of Scotland College of Agriculture, Crown Mansions, 41, Union Street, Aberdeen; Edinburgh and East of Scotland College of Agriculture, West Mains Road, Edinburgh, 9; West of Scotland Agricultural College, 6, Blythswood Square, Glasgow, C.2.

The other 12 Institutions, which are financed through the Scottish Education Department, are:

Scottish College of Commerce, Pitt Street, Glasgow, C.2; Heriot-Watt College, Chambers Street, Edinburgh, 1; Dundee Institute of Art and Technology (Dundee Technical College and Duncan of Jordanstone College of Art), 40, Bell Street, Dundee; Robert Gordon's Technical College, Aberdeen; Paisley College of Technology, Paisley, Renfrewshire; The Scottish Woollen Technical College, Galashiels, Selkirkshire; Glasgow School of Art, 167, Renfrew Street, Glasgow, C.3; Edinburgh College of Art, Lauriston Place, Edinburgh, 3; Glasgow and West of Scotland College of Domestic Science, 1, Park Drive, Glasgow, C.3; Edinburgh College of Domestic Science, 5, Atholl Crescent, Edinburgh, 3; Royal Scottish Academy of Music, St. George's Place, Glasgow, C.2; Leith Nautical College, 59, Commercial Street, Leith, Edinburgh, 6.

Some of the larger Central Institutions (six of which contain between 500 and 750 advanced full-time students) are generally of the same standing as the former English and Welsh Colleges of Advanced Technology. They are concentrating on advanced studies and are shedding to Further Education Centres (the Scottish equivalent of area and local colleges in England and Wales) part-time work below the level of higher education (i.e. work up to and including G.C.E. 'A' level and its equivalents). Some of the Central Institutions are polytechnics; others, as the list above indicates, provide a more limited range of courses. Heriot-Watt College is to become a University.

Three of the Central Institutions (Dundee Institute of Art and Technology, Robert Gordon's Technical College and Paisley College of Technology) offer courses leading to the external B.Sc. degree of London University. Before September 1964, the principal awards obtained in the technical institutions were College Associateships (equivalent to university honours or pass degrees) and College Diplomas (equivalent to university pass degrees) and Higher National Certificates and Diplomas. Awards will now be made by the Council for National Academic Awards as in England

and Wales. C.N.A.A. B.Sc. degree courses have already been recognised at Dundee Technical College and the Scottish Woollen Technical College.

Some of the Central Institutions have developed in association with neighbouring universities and will continue to do so. Lower levels of further education are provided in establishments similar to those in England and Wales.

NORTHERN IRELAND

As in England and Wales, statutory responsibility for the provision of further education rests with the local education authorities. The Belfast Education Authority maintains three **Central Institutions**:

Belfast College of Technology

Belfast College of Art

Belfast College of Domestic Science.

There are 27 other technical institutions and part-time classes are provided in more than 50 out-centres.

Advanced full-time and sandwich courses, including degree courses, are offered by Belfast College of Technology and Londonderry Technical College. The major provision is in the Belfast College of Technology, which maintains a close link with Queen's University, Belfast; most of its senior engineering students are taught by staff of the university departments concerned.

The principal award, apart from a university degree and college diplomas, is the Higher National Certificate, courses for which are offered at Belfast College of Technology, Larne Technical College and Londonderry Municipal Technical College.

The other technical institutions in Northern Ireland provide courses comparable with, but not as extensive as, those offered by comparable institutions in England and Wales and in Scotland.

THE UNIVERSITIES

The universities of the United Kingdom are independent self-governing bodies which do not come within the jurisdiction or control of any Government Department. They derive their rights and privileges from Royal Charter and any amendment of their charters or statutes is made by the Crown acting through the Privy Council on the application of the universities themselves. The

universities alone decide what degrees they shall award and the conditions on which they shall be awarded; they alone decide what students to admit and what staff to appoint.

The universities may be regarded as falling into six main groups:

- (a) The two old English universities of Oxford and Cambridge.
- (b) The four older Scottish universities.
- (c) The universities of London and Wales, which have a federal constitution, and the University of Durham, which formerly had a federal constitution.
- (d) The 'modern' or 'civic' universities, most of which were founded in the nineteenth century as university colleges and served a relatively long apprenticeship before being granted a charter and empowered to award their own degrees.
- (e) The eight new universities, which were empowered from the start to award their own degrees and which offer significantly new patterns of study.
- (f) The eleven new technological universities, nine in England (formerly Colleges of Advanced Technology) and two in Scotland.

(i) OXFORD AND CAMBRIDGE

The most distinctive feature of these universities is the college system. The colleges are completely autonomous so far as their property, finances and internal affairs are concerned, but the university awards degrees and determines the conditions on which they are awarded. Students become members of the university by becoming members of their college; their studies are largely guided by the senior members (generally called 'fellows') of their own colleges.

At **Oxford** there are 26 colleges and five recognised 'halls' for men and five colleges for women:

Men's Colleges and Halls

All Souls College (graduates only); Balliol College; Brasenose College; Christ Church; Corpus Christi College; Exeter College; Hertford College; Jesus College; Keble College; Lincoln College; Magdalen College; Merton College; New College; Nuffield College (graduates only, men and women); Oriel College; Pembroke College; Queen's College; St. Antony's College (graduates only); St. Catherine's College; St. Edmund Hall; St. John's College; St. Peter's College; Trinity College; University College; Wadham College; Worcester College.

Women's Colleges

Lady Margaret Hall; St. Anne's College; St. Hilda's College; St. Hugh's College; Somerville College.

Postgraduate Societies

Linacre House (established 1962 as a Society for graduates reading for advanced degrees or diplomas of the University in all subjects); St. Cross College (established 1965 for graduates only).

Permanent Private Halls

Campion Hall (established 1896 for members of the Society of Jesus only and granted present status in 1918). Greyfriars (established 1910 and granted present status 1957. Receives undergraduates for tuition in any school, giving priority of acceptance to student members of all branches of the Franciscan Order.) Mansfield College (founded 1886 to provide a 'Free Church faculty in theology in Oxford' and a college for the training of nonconformist ministers, mainly of the Congregational Church; granted present status 1955. Receives undergraduates for tuition for the B.A. degree and graduates for training in theology.) Regent's Park College (founded 1810 as the 'Baptist Academical Institute in Stepney', established in Oxford between 1927 and 1940; granted present status 1957. Admits theological students and others wishing to read for the B.A. degree or higher degrees.) St. Benet's Hall (established 1897 for members of the English Benedictine Abbey of Ampleforth, Yorkshire, only and granted present status 1918).

At **Cambridge** there are 21 colleges and one collegiate institution (Fitzwilliam House) and four colleges for women.

Men's Colleges

Christ's College; Churchill College; Clare College; Corpus Christi College; Darwin College (graduates only); Downing College; Emmanuel College; Fitzwilliam House; Gonville and Caius College; Jesus College; King's College; Magdalene College; Pembroke College; Peterhouse; Queens' College; St. Catharine's College; St. John's College; Selwyn College; Sidney Sussex College; Trinity College; Trinity Hall.

Women's Colleges

Girton College; Hughes Hall (graduates only); New Hall;
Newnham College.

Mixed College

University College (graduates only).

(ii) THE FOUR OLDER SCOTTISH UNIVERSITIES

St. Andrews (founded 1411); **Glasgow** (founded 1451);
Aberdeen (founded 1494); **Edinburgh** (founded 1583).

St. Andrews incorporates three and Aberdeen two other foundations (all dating from the fifteenth or sixteenth centuries), which were at one time independent. Queen's College, Dundee (founded 1881), is also part of the University of St. Andrews. The Royal College of Science and Technology was affiliated to Glasgow in 1913 but achieved full university status as the University of Strathclyde in 1964. The tradition of the Scottish universities does not reflect the residential character of the Oxford and Cambridge colleges.

(iii) THE FEDERAL UNIVERSITIES

The **University of London**, the largest of the British universities, was established in the nineteenth century. In 1826 what is now known as University College, London, was founded. King's College, London, was set up in 1829. The University of London itself was constituted by Royal Charter in 1836 as a body empowered to examine and confer degrees on students of approved institutions. Until 1900 its work was restricted to these functions but in exercising them it influenced and co-ordinated the activities of the various other colleges of university rank founded from time to time in London (such as Bedford College for Women, 1849).

From 1858 London University degrees, except in Medicine, were made available for students other than those in certain recognised institutions. The **external degrees** of the University, which were then instituted, still provide both in the United Kingdom and overseas an academic award of high standing for part-time students and others who are not enrolled in a university. London was the first British university to admit women to its degrees (in 1878).

In 1900 and 1926 the University's constitution and powers were revised and now not only is it a teaching as well as an examining body, but it has become a federation in which are incorporated 13 medical schools associated with hospitals, 14 non-medical colleges (called Schools of the University, e.g. University College and King's

College), together with a number of postgraduate and other institutions. Some other higher education establishments in London are also affiliated to the University and in others ('institutions with recognised teachers') certain members of staff are recognised as teachers of the University.

Non-medical Schools

Bedford College, Regent's Park, London, N.W.1; Birkbeck College (primarily for evening and part-time students), Malet Street, London, W.C.1; Imperial College of Science and Technology, Prince Consort Road, London, S.W.7; King's College, Strand, London, W.C.2; London School of Economics and Political Science, Houghton Street, Aldwych, London, W.C.2; Queen Elizabeth College, 61-67, Campden Hill Road, London, W.8; Queen Mary College, Mile End Road, London, E.1; Royal Holloway College, Englefield Green, Surrey; Royal Veterinary College, Royal College Street, Camden Town, London, N.W.1; School of Oriental and African Studies, University of London, London, W.C.1; School of Pharmacy, 29-39, Brunswick Square, London, W.C.1; University College, Gower Street, London, W.C.1; Westfield College, Kidderpore Avenue, Hampstead, London, N.W.3; Wye College (University Department of Agriculture and Horticulture), Wye, Ashford, Kent.

Theological Colleges

King's College, Theological Department; New College, 527, Finchley Road, London, N.W.3; Richmond College, Richmond, Surrey.

Undergraduate Medical and Dental Schools

Charing Cross Hospital Medical School, 62-65, Chandos Place, London, W.C.2; Guy's Hospital Medical School, St. Thomas's Street, London Bridge, London, S.E.1; King's College Hospital Medical School, Denmark Hill, London, S.E.5; London Hospital Medical School, Turner Street, London, E.1; Middlesex Hospital Medical School, Mortimer Street, London, W.1; Royal Dental Hospital of London, School of Dental Surgery; Royal Free Hospital School of Medicine, 8, Hunter Street, Brunswick Square, London, W.1; St. Bartholomew's Hospital Medical School, West Smithfield, London, E.C.1; St. George's Hospital Medical School, Hyde Park Corner, London, S.W.1; St.

Mary's Hospital Medical School, Norfolk Place, Paddington, London, W.2; St. Thomas's Hospital Medical School, Albert Embankment, London, S.E.1; University College Hospital Medical School, University Street, London, W.C.1; Westminster Medical School, Horseferry Road, London, S.W.1.

University Institutes

Courtauld Institute of Art, 20, Portman Square, London, W.1; Institute of Advanced Legal Studies, 25, Russell Square, London, W.C.1; Institute of Archaeology, 31-34, Gordon Square, London, W.C.1; Institute of Classical Studies, 31-34, Gordon Square, London, W.C.1; Institute of Commonwealth Studies, 27, Russell Square, London, W.C.1; Institute of Education, Malet Street, London, W.C.1; Institute of Germanic Studies, 29, Russell Square, London, W.C.1; Institute of Historical Research, Senate House, London, W.C.1; Institute of Latin-American Studies and Institute of United States Studies, 31, Tavistock Square, London, W.C.1; School of Slavonic and East European Studies, University of London, London, W.C.1; Warburg Institute, Woburn Square, London, W.C.1.

The **University of Wales** consists of four constituent university colleges and a medical school:

University College of Wales, Aberystwyth; University College of North Wales, Bangor; University College of South Wales and Monmouthshire, Cardiff; University College of Swansea; Welsh National School of Medicine.

As the result of a movement to provide higher education in Wales a university college was founded in Aberystwyth in 1872. A second college was set up in Cardiff in 1883 and a third in Bangor in 1884. The University of Wales was established in 1893 with Aberystwyth, Cardiff and Bangor as its constituent colleges. In 1920 a fourth college was constituted at Swansea. In 1931 the Welsh National School of Medicine, originally a branch of University College, Cardiff, was given the status of a school of the University.

St. David's College, Lampeter, has a special relationship with University College, Cardiff, but is not a part of the University; it is older than any of the university colleges, having been established in 1822. It was empowered by Royal Charter to confer its own bachelor's degrees in arts and theology. It is a small college (227 students) and is entirely residential. St. David's was not recognised

by the University Grants Committee as an institution of university status until 1961 when an agreement was made whereby University College, Cardiff, assumed sponsorship for the academic standard of the St. David's B.A. degree.

The Welsh College of Advanced Technology, which is not to become an independent university, may be associated with University College, Cardiff, and the Welsh National School of Medicine within the framework of the University of Wales.

The **University of Durham**, which was founded in 1832, mainly on the initiative of the Bishop and clergy of Durham, was also a federal university until 1963. The university had contained two divisions, one consisting of the Durham Colleges and the other of King's College, Newcastle upon Tyne. King's College was formed by the amalgamation in 1937 of the College of Medicine (founded 1834) and the College of Physical Science (founded 1871). The University of Newcastle was established as a separate university on 1st August, 1963.

With the University are affiliated Codrington College, Barbados, and Fourah Bay College, Freetown, Sierra Leone.

(iv) THE 'MODERN' OR 'CIVIC' UNIVERSITIES

Victoria University of Manchester, 1880 (originally Owen's College, Manchester, founded 1851); **University of Birmingham**, 1900 (originally Mason Science College, Birmingham, founded 1880); **University of Liverpool**, 1903 (originally University College, Liverpool, founded 1880); **University of Leeds**, 1904 (originally the Yorkshire College of Science, Leeds, founded 1874); **University of Sheffield**, 1905 (originally Firth College, Sheffield, founded 1879); **University of Bristol**, 1909 (originally University College, Bristol, founded 1876); **University of Reading**, 1926 (originally Reading University College, founded 1892); **University of Nottingham**, 1948 (originally University College, Nottingham, founded 1881); **University of Southampton**, 1952 (originally Hartley University College, Southampton, founded 1902); **University of Hull**, 1954 (originally University College, Hull, founded 1927); **University of Exeter**, 1955 (originally Exeter University Extension College, founded 1894); **University of Leicester**, 1957 (originally University College, Leicester, founded 1918).

The civic universities mostly originated in the university colleges set up in large towns and cities in the latter half of the nineteenth century and the early years of the twentieth. Until they became

universities in their own right the colleges offered courses leading to the external degrees of London University.

The Queen's University of Belfast was founded by Royal Charter as Queen's College in 1845 and became part of a federal Queen's University in 1850, together with colleges in Cork and Galway. The university was renamed the Royal University of Ireland in 1880. A reorganisation in 1908 led to the establishment in what is now the Irish Republic of a National University of Ireland, consisting of University College, Dublin, and the Cork and Galway Colleges. The University is financed largely by the Government of Northern Ireland, which has since 1945 been advised by the U.G.C.

(v) THE NEW UNIVERSITIES

University of Keele, 1962 (founded as the University College of North Staffordshire in 1949); **The University of Sussex**, 1961 (founded as a university college in 1959); **University of York**, 1963; **University of East Anglia**, 1964; **University of Essex**, 1964; **University of Lancaster**, 1964; **University of Kent at Canterbury**, 1964; **University of Warwick**, 1964; **University of Stirling**, 1965 (in course of establishment).

The new universities were established to meet the need for more university places. Their most distinctive features are that they are empowered from the beginning to award their own degrees and that they are trying to design courses which break down the conventional departmental structure and enable undergraduates to study different subject areas with equal intensity.

(vi) THE TECHNOLOGICAL UNIVERSITIES

The proposed University of Surrey (Battersea College of Technology, Battersea Park Road, London, S.W.11); **The proposed University of Aston in Birmingham** (Birmingham College of Advanced Technology, Gosta Green, Birmingham, 4); **The proposed University of Bradford** (Bradford Institute of Technology, Great Horton Road, Bradford, 7); **The proposed Bath University of Technology** (Bristol College of Science and Technology, Ashley Down, Bristol, 7); **Brunel College of Technology**, Woodlands Avenue, Acton, London, W.3; **Chelsea College of Science and Technology**, Manresa Road, London, S.W.3; **The proposed Heriot-Watt University** (Heriot-Watt College, Edinburgh, 1); **The proposed University of Loughborough** (Lough-

borough College of Technology, Loughborough, Leicestershire); **Northampton College of Advanced Technology**, St. John Street, London, E.C.1; **The proposed University of Salford** (Royal College of Advanced Technology, Peel Park, Salford, 5, Lancashire); **University of Strathclyde**, 1964 (formerly the Royal College of Science and Technology, Glasgow).

The Welsh College of Advanced Technology, Cathays Park, Cardiff, is not to become a separate university but may become part of the federal University of Wales.

The eleven new universities, which were formerly institutions offering advanced technological courses, received their status as a result of the Robbins Report on Higher Education. The University of Strathclyde and Heriot-Watt University were formerly Scottish Central Institutions, the others were Colleges of Advanced Technology (C.A.T.'s).

Strathclyde, as the Royal College of Science and Technology, Glasgow, and Heriot-Watt awarded their own Associateships and Diplomas. The nine C.A.T.'s provided mainly full-time and sandwich courses for external degrees of London University, the Diploma in Technology or their own diplomas. They were originally maintained by local education authorities but were designated as C.A.T.'s during the session 1956-57, following the rationalisation of 1956. On 1st April, 1962, all C.A.T.'s became direct grant establishments supported by the then Ministry of Education and ceased to be maintained by local authorities; Loughborough College of Technology had already received direct grant since 1953. Following designation in 1956-57 the Colleges shed much of their lower level work to other institutions and by 1963 over 90% of their full-time students were taking advanced courses. Much of the expansion of full-time work was associated with the introduction of the Diploma in Technology and in 1962-63 80% of all candidates for this qualification were studying in the nine colleges.

Several of the new universities hope to move from their present sites to new locations in the country.

OTHER TEACHING ESTABLISHMENTS

COLLEGES OF EDUCATION

The colleges of education (which were known as teacher training colleges until December 1964) are the main providers of education

for intending teachers. They are described under Teaching in Part 6. Responsibility for them is shared between the Government, local education authorities and voluntary bodies. There are 166 colleges in England and Wales, nine in Scotland and three in Northern Ireland.

There are many other vocational and specialist teaching establishments which will be described in relevant sections of this book. This is, however, an appropriate point at which to mention the **National Colleges** which are either assisted or supported by the Department of Education and Science:

National College of Agricultural Engineering, Silsoe, Bedfordshire; **National College of Food Technology**, St. George's Avenue, Weybridge, Surrey; **National College for Heating, Ventilating, Refrigeration and Fan Engineering**, Borough Polytechnic, Borough Road, London, S.E.1; **National Foundry College**, Stafford Street, Wolverhampton, Staffordshire; **National Leather-sellers College** (The National College for the Leather Industry), 176, Tower Bridge Road, London, S.E.1; **National College of Rubber Technology**, Northern Polytechnic, Holloway Road, London, N.7.

These colleges have been established and financed jointly by the Department of Education and Science and industry to provide advanced technical studies for particular industries. The National College of Food Technology is now to be associated with the University of Reading.

Royal College of Art, Kensington Gore, London, S.W.7. The Royal College of Art receives grant directly from the Department and was designated a national college in 1949, under a Council with full executive powers.

College of Aeronautics (with the Advanced School of Automobile Engineering and the Work Study School), Cranfield, Bedfordshire. This college receives grant-in-aid from the Department and is a specialist establishment providing advanced technological education exclusively at postgraduate level.

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Part 2

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Secondary School Examinations

NATIONAL EXAMINATIONS IN ENGLAND AND WALES

The best known examination at present taken in secondary schools is the General Certificate of Education, which provides the basic qualification for higher studies and professional life. It is conducted at two levels, Ordinary ('O') and Advanced ('A'). It was introduced in England and Wales in 1951 to replace the old School Certificate and both Scotland and Northern Ireland have since revised their own Certificate examinations in favour of a similar pattern. The G.C.E. examinations have an outstanding national prestige since the universities, training colleges, other further education establishments and many professional organisations express some or all of their entrance requirements in terms of G.C.E. passes. The G.C.E. thus has an easily recognisable standing and currency.

Candidates for the G.C.E. come mainly from grammar schools and grammar streams in comprehensive and bilateral schools, but pupils in other schools have entered for it in growing numbers in recent years. Candidates for Ordinary level taking five or more subjects represent the first 20% of their age group in ability; but many others take one or more subjects. Advanced level is normally taken by candidates who stay on at school for two years after sitting 'O' level and represents a greater degree of specialisation.

Below the level of the G.C.E. there are a number of other secondary school examinations. In England and Wales, the proliferation of these examinations, run nationally, regionally and locally, has led to the introduction of a new national examination, organised regionally, for the Certificate of Secondary Education (C.S.E.). This examination, which is intended to replace other examinations, is designed chiefly for pupils in that 40% of the ability range below the 20% who take G.C.E. in five or more subjects and who are mostly following courses in secondary modern schools and streams. Its purpose is to provide a valid record of attainment at the end of a five-year course of secondary education.

(i) **THE SCHOOL CERTIFICATE** (instituted 1917 and discontinued 1950)

The School Certificate examinations were conducted by eight examining boards, approved for that purpose by the President of the Board of Education (after 1944, the Minister of Education). These were:

Oxford and Cambridge School Examinations Board
Oxford Delegacy for Local Examinations
Cambridge Local Examinations Syndicate
University of Bristol
University of London Matriculation and School Examinations Board
Northern Universities Joint Matriculation Board
Central Welsh Board
Durham University Matriculation and School Examinations Board.

It was conducted at two levels; the earlier examination, generally taken at 16, was for the **School Certificate**, and the later, taken at 17 or 18, was for the **Higher School Certificate**.

Candidates for the **School Certificate** were drawn almost exclusively from the grammar schools and were comparable in ability with pupils who now take G.C.E. 'O' level in five or more subjects. School Certificate was the minimum qualification for entering into most commercial and professional occupations. Candidates had to reach the required standard in not less than five subjects in three main groups (English language, science and mathematics) and had to pass in all three groups to obtain a Certificate. There were two standards for each subject, pass and credit, and some boards also granted 'very good' or distinction gradings. The conditions for the award of a School Certificate varied from board to board, and from time to time.

Higher School Certificate corresponded with G.C.E. 'A' level. It was at first, like the School Certificate, a group examination, but grouping died out. Conditions for the award of a Higher School Certificate also varied between the boards. Candidates had to offer papers in their main or 'Principal' subjects and in 'Subsidiary' subjects. Some boards also set papers at an 'Advanced' or 'Higher' level. The standards of 'Subsidiary' papers were not comparable as the boards held different views about their importance. Some boards required passes in three Principal papers or in two Principal papers and two Subsidiary papers; others required passes in two Principal papers and one Subsidiary paper. There were three standards for each Principal subject, Distinction, Good and Pass.

In 1920-21, the Board of Education instituted the system of State Scholarships and it was decided that the awards should be made in accordance with the candidate's performance in his Principal papers in the H.S.C. Examination and upon the recommendation of the Examining Boards. From the same time, local education authorities increasingly made use of the H.S.C. Examination in selecting their own award holders. In addition, appropriate passes in H.S.C. gave exemption from the first year (Intermediate) examinations of many universities. Depending on the university, three or four Principal passes provided 'Inter-B.A.' or 'Inter-B.Sc.' exemption.

Matriculation, strictly speaking, means admission to the status and privileges of a student at a university. But, as many universities came to accept performances of a certain level in School Certificate as an exemption from their entrance or intermediate examinations, the term 'matriculation' came to mean simply the attainment of that standard in School Certificate. However, it was possible to obtain matriculation by sitting an external examination set by the university. The Matriculation Certificate was harder to get than the simple School Certificate as it required a number of passes with credit in special subjects. To gain 'Matriculation' by means of the School Certificate Examination became the aim of thousands of secondary school pupils who were not going on to university. A 'Matriculation Certificate' was regarded by candidates as a superior kind of Certificate. Many employers thought of it as more valuable than an ordinary School Certificate and as they often asked for it from their recruits it possessed a distinct commercial value, especially during the Depression when jobs were short.

(ii) THE GENERAL CERTIFICATE OF EDUCATION (G.C.E.) (instituted 1951)

The School Certificate Examinations were replaced by those for the General Certificate of Education in 1951.

Examinations for the G.C.E. are conducted by eight independent Examining Boards, seven of which previously examined for the School Certificate. (A ninth board, the Durham University Matriculation and School Examinations Board, discontinued its school examinations in 1964.) The eight Boards are:

Associated Examining Board for the General Certificate of Education, Wellington House, Station Road, Aldershot, Hampshire.

Cambridge University Local Examinations Syndicate, Syndicate Buildings, Cambridge.

Northern Universities Joint Matriculation Board, Manchester, 15.

London University Entrance and School Examinations Council, Senate House, London, W.C.1.

Oxford and Cambridge School Examinations Board, Elsfeld Way, Oxford, and 10, Trumpington Street, Cambridge.

Oxford Delegacy of Local Examinations, 12, Merton Street, Oxford.

Southern Universities' Joint Board for School Examinations, 22, Berkeley Square, Bristol, 8.

Welsh Joint Education Committee, 30, Cathedral Road, Cardiff.

The G.C.E. Examinations are set on a single-subject basis at two levels, **Ordinary** ('O') and **Advanced** ('A'). The main examination is held during the summer term, but another, usually in a more limited range of subjects, is held in January. There are no compulsory subjects at either level.



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The G.C.E. was conceived as mainly an academic examination for the grammar schools, which would offer a convenient means of gaining exemption from university entrance requirements and from the preliminary examinations of many professional organisations. Six of the eight Examining Boards are either agents of or closely associated with universities. But because, like the School Certificate, the G.C.E. is generally regarded, at both levels, as the key to professional status, higher education and better pay, the 'O' level examinations soon attracted a constantly growing number of entries from establishments other than grammar schools. This process was probably accelerated by the establishment in 1953 of another Examining Board, the Associated Examining Board, which is not related to a university but to the City and Guilds of London Institute and whose examinations adopt a different approach more suited to the needs of technical students. Many candidates take the G.C.E. after leaving school — sometimes long after — at further education colleges or by correspondence courses.

One of the main differences between the G.C.E. and the School Certificate is the fact that the former is a 'subject' examination. This means that candidates may take the examination and get certificates in as few as three or two subjects or perhaps only one; and that, although the standard of the 'O' level is higher than that of the School Certificate pass, some candidates in the ability range for which the School Certificate was suitable take and may pass the G.C.E. Examination in a limited number of subjects. Candidates may take as many or as few subjects at as many sittings as they wish; they may take different subjects at the same level in different years, or they may take some subjects at 'O' level and some at 'A' level in the same year.

The '**O**' level papers are normally taken by candidates at the end of a five-year course in a secondary school. Their standard was intended to be roughly the same as that of the credit level of the School Certificate.

The main body of candidates for 'O' level comes from grammar schools and grammar streams, but many pupils in other schools also take it in several subjects. There is no upper age limit and candidates are also prepared for the examinations by colleges of further education and other institutions. A good performance at 'O' level is regarded by most schools as an indication that the pupil will benefit from a sixth form course leading to 'A' level, and 'O' level acts in some sense as a means of selection for sixth form courses and beyond. But it is not obligatory to take a subject at 'O' level before tackling it at 'A' level. 'O' level results are graded for

the information of schools and candidates, but the grades are not published or recorded on the Certificates.

'A' level papers are normally taken after two years' study in the sixth form; their standard is equivalent to the Principal subject level in the Higher School Certificate. (There is no level in the G.C.E. corresponding to the 'subsidiary' in the Higher School Certificate.)

Until recently, pupils taking sixth form courses were aiming principally at admission to establishments of higher education and 'A' level was and is used by the universities and other bodies as a guide in selecting students. Now more pupils stay on at school who do not intend to take university courses and professional organisations are granting exemptions from their own examinations in terms of 'A' level as well as 'O' level. In view of the much stiffer competition for places, universities require more than simple passes at 'A' level to qualify for admission.

There are five grades of pass at 'A' level, A, B, C, D and E. Until 1962, **Scholarship** papers were available in some subjects for candidates wishing to be considered for state scholarships. But the competitions for state scholarships were discontinued in 1963, except for mature students, and scholarship papers are no longer set. A new type of paper, **Special ('S')** papers, has been introduced into the 'A' level examination. These papers are set in most of the subjects in which scholarship papers were formerly set, normally on the same syllabus as the basic 'A' level papers but with questions designed to test the intellectual grasp of the abler sixth former and his capacity to think about his subject.

Candidates who receive a grading—A, B, C, D and E—in their basic 'A' level papers are eligible to have their work on 'S' papers taken into account. They may be given a supplementary grading of 'Distinction' or 'Merit' based on their performance on 'S' papers.

Candidates are not normally expected to take 'S' papers in more than one subject and are not allowed to take them in more than two.

(The Department of Education and Science's pamphlet 'The General Certificate of Education', H.M.S.O. 1964 2s., lists over 70 professional organisations which accept the G.C.E. in lieu of their own requirements.)

- (iii) THE CERTIFICATE OF SECONDARY EDUCATION (C.S.E.) (instituted 1965)

The C.S.E. is a new examination for pupils aged 16 in England and Wales. It is designed mainly for candidates in non-grammar schools and streams who would not take the G.C.E. 'O' level in

four or more subjects. It is intended to replace the multiplicity of existing national, regional and local examinations at this level. The examinations are organised regionally by 14 examining bodies approved for that purpose by the Secretary of State for Education and Science and controlled by teachers. The bodies are:

<u>Regional Examining Board</u>	<u>Area served</u>
South-Western Examinations Board, 23-29, Marsh Street, Bristol, 1. (H. L. M. Household, B.Sc., Secretary)	Cornwall, Devonshire, Gloucestershire, Somerset, Wiltshire; Bath, Bristol, Exeter, Gloucester and Plymouth.
East Midland Regional Examinations Board, East Midland Educational Union, 1, Clinton Terrace, Derby Road, Nottingham. (W. C. Watterson, B.Sc., Secretary)	Derbyshire, Holland, Kesteven, Leicestershire, Northamptonshire, Nottinghamshire, Rutland; Derby, Grimsby, Leicester, Lincoln, Northampton and Nottingham.
West Midlands Examination Board, Norfolk House, Smallbrook Ringway, Birmingham, 5. (W. Aspinall, F.C.I.S., Secretary)	Herefordshire, Shropshire, Staffordshire, Warwickshire, Worcestershire; Birmingham, Burton-on-Trent, Coventry, Dudley, Smethwick, Stoke-on-Trent, Solihull, Walsall, West Bromwich, Wolverhampton and Worcester.
West Yorkshire and Lindsey Regional Examining Board, Scarsdale House, 136, Derbyshire Lane, Sheffield, 8. (R. G. Capes, M.A., LL.B., Secretary)	Lincolnshire (Lindsey), Yorkshire West Riding; Barnsley, Doncaster, Rotherham and Sheffield.
Yorkshire Regional Examinations Board, Princess Field Place, Jack Lane, Leeds, 11. (J. Pare, M.A., Secretary)	Yorkshire East Riding, Yorkshire North Riding; Bradford, Dewsbury, Halifax, Huddersfield, Hull, Leeds, Wakefield and York.
Southern Regional Examinations Board, 3, London Road, Southampton. (D. C. Spencer, D.F.M., M.A., Secretary)	Dorset, Hampshire, West Sussex, the Isle of Wight, Berkshire, Oxfordshire, Buckinghamshire; Bournemouth, Oxford, Portsmouth, Reading and Southampton; the States of Guernsey and Jersey and the Committee on the Education of Service Children Overseas.
South-East Regional Examinations Board, Beloe House, 2-4, Mt. Ephraim Road, Tunbridge Wells, Kent. (P. N. Anderson, B.A., Secretary)	East Sussex, Kent, Surrey (except Croydon); Canterbury, Brighton, Eastbourne and Hastings; the London Boroughs of Bexley, Bromley, Kingston-upon-Thames, Merton, Richmond-upon-Thames and Sutton.

Regional Examining BoardArea served

Wales
Welsh Joint Education Committee,
30, Cathedral Road, Cardiff.
(D. A. Davies, Secretary)

Wales and Monmouthshire.

North Regional Examinations
Board,
4, Ellison Place, Newcastle upon
Tyne.
(J. A. Winterbottom, B.A., Secretary)

Cumberland, Durham,
Northumberland, Westmorland;
Carlisle, Darlington, Gateshead,
Middlesbrough, Newcastle upon Tyne,
South Shields, Sunderland,
Tynemouth and West Hartlepool.

East Anglian Regional
Examinations Board,
The Lindens, Lexden Road,
Colchester, Essex.
(A. Johnson, M.Sc., Secretary)

Bedfordshire, Cambridgeshire,
East Suffolk, Essex, Hertfordshire,
Huntingdonshire, the Isle of Ely,
Norfolk, West Suffolk;
Great Yarmouth, Ipswich,
Norwich, Southend-on-Sea,
Peterborough Joint Board.

Metropolitan Regional Examinations
Board, 29, Queen Anne's Gate,
(Fifth Floor), London, S.W.1.
(D. H. Board, M.A., Secretary)

The area of the Inner London
Education Authority and the London
Boroughs of Croydon and Newham.

Middlesex Regional Examining
Board, The Old Court House,
High Street, Wealdstone, Harrow.
(W. J. Leake, B.A., Secretary)

The London Boroughs of Brent,
Ealing, Haringey, Harrow, Hillingdon,
Hounslow; parts of Barnet,
Richmond-upon-Thames.

North-Western Secondary School
Examinations Board, Africa House,
54, Whitworth Street,
Manchester, 1.
(Dr. I. K. Jackson, Secretary)

Lancashire, Cheshire;
Barrow-in-Furness, Birkenhead,
Blackburn, Blackpool, Bootle,
Burnley, Bury, Chester,
Liverpool, St. Helens, Southport,
Stockport, Wallasey, Wigan,
Warrington, the Isle of Man.

Associated Lancashire Schools
Examining Board,
Refuge Assurance Buildings,
77, Whitworth Street, Manchester, 1.
(P. Lawrence, B.A., M.A.(EGON.),
Secretary)

Bolton, Manchester, Oldham,
Preston, Rochdale and Salford.

The examination is intended to provide an assessment of the pupil's attainment in a subject at the end of a five-year course of secondary education and to take account of classwork. There are no compulsory subjects and candidates are eligible for the award of a certificate on the basis of one or more subjects. There is only one level and the examination is meant to be taken in schools only.

The results are expressed as grades on a five-point scale. Grade 1 is deemed equivalent to a pass in the same subject at G.C.E. 'O'

level. It is expected that many professional bodies will accept a grade 1 pass as an alternative to a G.C.E. 'O' level pass. The Department of Education and Science hopes to define in the next edition of its pamphlet on the G.C.E. the requirements of some or all the professional bodies it lists in terms of the C.S.E.

At the time of writing, 48 organisations which require G.C.E. 'O' level passes as part of their entry qualifications have already said that they are prepared to accept as equivalent C.S.E. grade 1. They include the Civil Service Commission, the National Joint Council for Local Authorities' Administrative, Professional, Technical and Clerical Services, the General Nursing Council, the Royal Institute of British Architects and the Joint Committees for National Certificates and Diplomas.

Certificates are awarded only to those candidates who secure at least one grade in the range 1 to 4. Where Certificates are issued they also record any grades 5 achieved. Other grades, together with ungraded performances, are officially communicated to the candidate and to his school, but are not recorded on Certificates.

The Examinations can be set in three ways: (a) external examinations set by the Examining Boards based on syllabuses prepared by their subject panels; (b) external examinations by the Boards of syllabuses prepared by a school or group of schools; (c) internal examinations by a school devising its own syllabuses, with the standard assessed by the Examining Board.

The scope of the Examination envisages that it should be designed for a band of candidates extending from those who just overlap the group taking G.C.E. 'O' level to those who are just below the average in ability. But this definition is not to be interpreted too rigidly. There are some whose ability in a particular subject would justify their taking the Examination in it although their general ability is not strong; equally, some pupils with good general ability would be ill-advised to enter for certain subjects.

NATIONAL EXAMINATIONS IN SCOTLAND

The nearest equivalent in Scotland to the G.C.E. is the Scottish Certificate of Education. There are two grades: Ordinary and Higher. It was introduced in 1962, replacing the Scottish Leaving Certificate which, introduced eleven years before, had been the

latest form of an examination conducted by the Scottish Education Department since 1888.

The practice has always been to provide a broad general education in the senior secondary schools between the ages of 12 and 17—the latter being the age of admission to Scottish universities—and to provide specialised courses for only those few students who wanted them. The universities, whose honours degree course lasts four years as against three in England and Wales, and colleges were left with the task of specialisation. The work done in the English upper sixth form was very largely done in Scotland during the first year of the university course.

Now it is proposed to introduce in Scotland a new examination, related to sixth form work, at a standard above that of the Higher Grade of the Scottish Certificate of Education.

The introduction of the Ordinary grade of the Scottish Certificate of Education in 1962 seems to have gone a long way towards meeting the needs of pupils in junior secondary schools for an assessment of attainment by traditional examination means. Accordingly, the introduction of an examination comparable with the C.S.E. is not contemplated.

Otherwise the pattern is not unlike that in England and Wales before C.S.E. A small number of Scottish pupils take external examinations offered by independent examining bodies.

(i) THE SCOTTISH LEAVING CERTIFICATE (instituted 1888)

(ii) THE SCOTTISH CERTIFICATE OF EDUCATION (instituted 1962)

The **Scottish Certificate of Education** was introduced in 1962. It replaced the **Scottish Leaving Certificate** which, introduced in 1951, was the latest form of an examination conducted by the Scottish Education Department since 1888.

The examinations were conducted under the immediate direction of H.M. Inspectors of Schools (Scotland), but in 1964 the Secretary of State for Scotland transferred responsibility for them to an independent Scottish Certificate of Education Examinations Board, representative of the educational interests concerned.

Between 1902 and 1961 the examinations for the S.L.C. were held in March on two grades, Lower and Higher, both taken at 17 years of age during the fifth year of the secondary course. Subjects were taken simultaneously, some at the Higher and others at the Lower grade. The S.L.C. could be taken only at school.

In 1962, when the examination was renamed, the new grade, called the Ordinary grade, was introduced to replace the Lower

grade. The Ordinary grade corresponds with Ordinary level of the G.C.E. and is taken a year earlier than the Lower grade, in the fourth year of the secondary course; it is not of such a high standard as the Lower grade.

The standard of the Higher grade was unchanged. Pupils take it in the fifth or sixth year of the secondary course (i.e. at 17 or 18), but usually a year earlier than their English and Welsh counterparts sit for Advanced level of the G.C.E. The standard of the Higher grade is somewhat lower than that of G.C.E. Advanced level. Success in the examination secures for the candidate complete or partial exemption from the entrance examinations of the Scottish and other universities and many professional associations.

The S.C.E. is open to candidates who have left school.

The performance of candidates in all subjects passed on the Higher grade can be measured by the letters 'A', 'B' and 'C' against the appropriate subjects on the candidate's certificate. 'A' indicates a mark of 70% or more; 'B' a mark of 60-69%; and 'C' a mark of 50-59%.

(iii) THE SCOTTISH UNIVERSITIES PRELIMINARY EXAMINATION

This examination is conducted by the Scottish Universities Entrance Board, Kinburn House, St. Andrews, Fife. It was intended for candidates who wanted to improve their S.L.C. qualifications after leaving school with a view to going on to university. It consists of the same grades and is of the same standard as the examinations for the Scottish Certificate of Education. The examination is a test of the fitness of an intending student to enter upon a course of study leading to a degree in a Scottish university. The successful candidate is issued with a **Certificate of Attestation of Fitness**. The applicant for this Certificate of Attestation may satisfy the Board's requirements in terms of its own Preliminary Examination or the Scottish Certificate of Education or the G.C.E. The subjects recognised as qualifying in these three examinations are arranged in groups and the Board's requirements are conveniently summarised in Appendix I of the Association of Commonwealth Universities' 'Compendium of University Entrance Requirements' (1965), pp. 210-211.

The Junior Leaving Certificate is awarded by some local education authorities on completion of a three-year course of secondary education. The certificate has only a local value, but before 1962 there were many cases of pupils staying on at school beyond the minimum leaving age in order to earn one. Others,

including Fife and Edinburgh, award a certificate on the results of an external examination, designed in the context of the pupil's movement into further education.

NATIONAL EXAMINATIONS IN NORTHERN IRELAND

The most important schools examination now taken in Northern Ireland is the Northern Ireland General Certificate of Education. This is comparable with the English and Welsh G.C.E., being taken at two levels, Ordinary and Advanced, at 16 and 17 or 18 respectively. It has now replaced the old Northern Ireland Senior Certificate which was discontinued in 1962.

Below G.C.E. level, there are a number of other examinations. Among these are the Northern Ireland Junior Certificate and Junior Technical Certificate, both taken at 14, and the Northern Ireland Technical Certificate at 16.

- (i) THE NORTHERN IRELAND SENIOR CERTIFICATE (instituted 1925, reconstituted as the Grammar School Certificate and discontinued 1962)

The examinations for the **Senior Certificate**, which were reconstituted in 1952, were conducted by the Northern Ireland Ministry of Education. It was replaced by the Northern Ireland General Certificate of Education in 1963 in order to provide pupils in Ulster with a certificate comparable with the G.C.E. and to ensure that the standards of the certificate should be acceptable without reservation throughout the United Kingdom on a basis of equivalency with the G.C.E.

The Senior Certificate was a group examination, intended to provide evidence of the successful completion of a grammar school course at least five years long. There were two levels, Ordinary and Advanced, the former normally taken at 16 and the latter at 17 and 18. Admission to the examination was confined almost exclusively to school pupils; candidates had to have attended a grammar school from the beginning of the school year in which the examination was held and followed an approved course in the secondary department of a grammar school for at least five years.

To obtain a certificate, the candidate had to take and pass six subjects; a certificate could be awarded in certain conditions on the

basis of five passes. The groups were English language, languages, and science and mathematics.

(ii) THE NORTHERN IRELAND GENERAL CERTIFICATE OF EDUCATION

(iii) NORTHERN IRELAND SENIOR CERTIFICATE (instituted 1963)

The examinations for the **Northern Ireland G.C.E.** are under the direction of the Northern Ireland Senior Certificate Examination Committee and are conducted by the Northern Ireland Ministry of Education. The examinations are on two levels, Ordinary and Advanced, taken at 16 and 17 or 18 respectively. The standard of both levels corresponds with that of the same levels in the English and Welsh G.C.E.

The Northern Ireland G.C.E. examinations are taken by candidates in all three types of secondary school.

Ordinary level performances are classified into nine numerical grades in descending order of merit; the grades of pass are numbered 1 to 6. Advanced level performances are classified into five grades of pass lettered A to E in descending order of merit.

The **Northern Ireland Senior Certificate** is the old Senior Certificate in a new guise. Its important feature is that it is a group certificate; it is awarded on the results of the same examinations as the Northern Ireland G.C.E. A group certificate has been retained to meet the needs of the pupil who does not intend to go on a course of higher education and who wants evidence in certificate form that he has successfully completed a broadly based secondary education.

The candidate for the Senior Certificate must obtain, at not more than two sittings, passes at Ordinary or Advanced level in English language, classical or foreign languages, two subjects from three groups comprising the humanities, mathematics and science and at least two other subjects from the general list of all subjects in which examinations are provided.

(iv) THE NORTHERN IRELAND JUNIOR CERTIFICATE

The **Junior Certificate** examination is an optional group examination for grammar school pupils aged 14 at the end of their third year of secondary education. It was a stepping-stone to the old Senior Certificate and is likely to decline in importance with the introduction of the Northern Ireland G.C.E. It is also taken by candidates in secondary intermediate schools but it is probable that pupils will now aim instead at the G.C.E.

To obtain the Junior Certificate the candidates must pass in at least six subjects, including English language; the other five subjects must be selected in accordance with the regulations,

(v) THE NORTHERN IRELAND JUNIOR TECHNICAL AND TECHNICAL CERTIFICATES

Pupils in technical intermediate schools are prepared chiefly for the **Junior Technical Certificate** examinations, taken usually at the age of 14 or 15, and the **Technical Certificate** examinations, taken at 16. The subjects offered are mainly technical and reflect the scope of the work carried on in these schools. The examinations are group examinations; candidates must take five or six subjects, certain of which are compulsory.

OTHER SECONDARY SCHOOL EXAMINATIONS

Apart from the principal national examinations mentioned above there are many others that are taken in schools, mainly at a level lower than G.C.E. Some, like the College of Preceptors' and Royal Society of Arts' examinations, are conducted by national examining bodies. Others are organised on a regional or local basis.

Their main purpose has been to provide qualifications for children who have not, for various reasons, been able to obtain G.C.E. or similar qualifications. How they will fare in the light of competition from the C.S.E. remains to be seen.

OTHER NATIONAL EXAMINATIONS

- (i) THE COLLEGE OF PRECEPTORS: SCHOOL CERTIFICATE AND SENIOR CERTIFICATE: 2 and 3, Bloomsbury Square, London, W.C.1.

The College of Preceptors, which is a society of teachers, was founded in 1846 and was granted a Royal Charter in 1849. Before the establishment of the School Certificate in 1917, it was an important schools examinations organisation. Since then the College has conducted school examinations for children in non-grammar schools and independent schools throughout the United Kingdom and in certain Commonwealth countries.

The standard of the examinations is so geared that children in the second 25% of ability take a 'full' certificate; children of less ability may be able to take some subjects and to obtain a 'statement'. The College has set up 13 regional boards, consisting of heads of the candidates' schools. The object of the examinations is to enable 'teachers . . . to satisfy themselves, the parents of the children, technical colleges offering further education and future employers, that these children have made full use of whatever abilities they

possess. . . . The examinations show that a child has had a good general education. They are not "technical" or "commercial" examinations, but children can take technical or commercial subjects in the examinations.' (Explanatory leaflet published by the College.)

The College continued to offer these examinations after the introduction of the C.S.E. in 1965.

The College of Preceptors — School Certificate Examination is the examination held annually in June and July at School Centres approved by the College. The minimum age for entry is 14. In order to qualify for a Certificate, the candidate must, at one and the same examination, pass in English and at least four other subjects. A candidate who passes in five or more subjects but fails in English may be referred and allowed to take it again at a further examination.

A Statement is issued to candidates who do not pass the examination as a whole, or who do not take the number of subjects required for a Certificate, indicating the subjects in which they have passed.

The pass mark in each subject is 40%; a mark of 70% or over gains the candidate a Distinction.

The College of Preceptors — Senior Certificate Examination, which was established before the 1917 School Certificate, is now intended mainly for candidates in non-grammar schools near the end of a five-year course. It is held each June at School Centres approved by the College. A candidate must, in order to qualify for a Senior Certificate, pass at one and the same examination in English and at least five other subjects. Candidates who pass in six or more subjects but fail in English may be referred and allowed to take it again at a further examination.

A Statement is issued in the same way as for the School Certificate examination.

The pass mark in each subject is 40%; a Credit is awarded for a mark of 50% and a Distinction for 70%. The College says that a Credit mark is equivalent to a pass at G.C.E. 'O' level.

Possession of the Senior Certificate is regarded by some professional bodies as evidence of sufficient general education for certain purposes. These bodies, 27 in all, are listed in the College's 'Regulations and Syllabuses', obtainable from the Secretary, College of Preceptors, 2 and 3, Bloomsbury Square, London, W.C.1.

(ii) **THE ROYAL SOCIETY OF ARTS SCHOOL CERTIFICATE EXAMINATIONS:**

The Royal Society of Arts, John Adam Street, London, W.C.2.

The aims of the Royal Society of Arts, which was founded in 1754 and given a Royal Charter in 1847, are to advance, develop and

apply every branch of science in connection with the arts, manufactures and commerce. The Society holds each year widely esteemed examinations for students of commercial subjects and languages. The annual entry for all examinations runs at about 500,000.

The Society's School Certificates are awarded on a group basis and in the Commercial and Technical examinations the grouping is prescribed by the Society's regulations; in the School Certificate the selection of subjects, apart from English, is left to the discretion of the schools. Candidates may also enter for single subjects and obtain a certificate showing the subject or subjects in which they have passed.

The Society says that a 'Pass with Credit' is about equivalent in standard to a G.C.E. 'O' level pass.

The Royal Society of Arts School Certificate is awarded to candidates who pass at one and the same examination in English and at least four other subjects.

The Royal Society of Arts School Certificate (Commercial) is awarded to candidates who pass at one and the same examination in English, at least three subjects from among Accounts, Arithmetic, Commerce, Shorthand (50 or 60 w.p.m.) and Typewriting and at least one subject from those others listed in Regulation I of the 'School Certificate Examinations Regulations'.

The Royal Society of Arts School Certificate (Technical) is awarded to candidates who pass at one and the same examination in English, Mathematics I and II, at least one subject from among six Science subjects, at least one subject from among four practical subjects and at least one subject from among those others listed in Regulation I.

The pass mark in each subject is 50%; a 'Pass with Credit' is awarded for a mark of 70%. In Shorthand, 50-69 marks represent a speed of 50 w.p.m. and 70-100 marks represent a speed of 60 w.p.m.; a 'Pass with Credit' is awarded only to candidates who get a high proportion of the marks allotted to the shorthand notes. The Certificates state the subjects in which the candidate has passed or passed with credit; for Shorthand, the Certificate states the speed in which the candidate has passed and, where appropriate, 'with typewritten transcript' is endorsed on the Certificate of successful candidates who have typed all transcripts satisfactorily.

- (iii) THE LONDON CHAMBER OF COMMERCE: 69, Cannon Street, London, E.C.4.

The London Chamber of Commerce conducts a number of examinations in commerce, commercial law and foreign languages. The

School Certificate examinations are taken by candidates in non-grammar and independent schools throughout the United Kingdom and Ireland and in certain Commonwealth countries.

The School Certificate of Commercial Education (Intermediate stage) is awarded on a group basis but candidates may obtain the necessary subjects at not more than three examinations. There is no age limit, but the examination is normally taken in the fifth year of a secondary course.

Candidates must obtain passes in Arithmetic, Book-keeping or History, Geography, English, a foreign language and at least two other subjects. They may be awarded a certificate for each subject in which they pass if they fail to get enough passes for the School Certificate.

The pass mark is 50%; a mark of 75% is a 'Pass with Distinction'.

REGIONAL EXAMINATIONS

- (i) THE UNION OF LANCASHIRE AND CHESHIRE INSTITUTES: Africa House, 54, Whitworth Street, Manchester, 1.

The Union, which is now a federation for purposes of further education of the local education authorities in Lancashire, Cheshire, Flintshire, Denbighshire, Caernarvonshire, Breconshire, Anglesey, the High Peak and the Isle of Man, originated in the movement for public education following the industrial revolution and is an amalgam of many institutions established for this purpose in the north-west. It started its examinations for its **Secondary School Certificate** in 1956. The Union was the first examining body outside London to provide an examination specifically designed for schools.

The examinations, which were conducted on a single-subject basis, were intended for candidates in the middle-ability ranges who had completed a five-year secondary course mainly in non-grammar schools. They were discontinued in 1965, when they were replaced by the C.S.E. examinations conducted by the North-Western Secondary School Examinations Board (serviced by the Union).

- (ii) THE NORTHERN COUNTIES TECHNICAL EXAMINATIONS COUNCIL: 5, Grosvenor Villas, Grosvenor Road, Newcastle upon Tyne.

The Council, whose members are six county councils and ten county boroughs, was founded in 1920 to provide a system of further education examinations for the north. The **Northern Counties School Certificate** (instituted in 1959) is designed for candidates who have

completed at least a four-year course in a secondary modern school; the minimum entry age is 15.

The examinations are held annually in May and June and are restricted to schools maintained by local education authorities in membership of the Council (counties: Cumberland, Durham, Yorkshire East Riding, Yorkshire North Riding, Northumberland, Westmorland; county boroughs: Carlisle, Darlington, Gateshead, Middlesbrough, Newcastle upon Tyne, South Shields, Sunderland, Tynemouth, West Hartlepool, York).

To obtain a Certificate, the candidate must pass in four subjects, including English and either Arithmetic or Mathematics, together with at least one subject from among a group prescribed by the Council.

The pass mark is between 40-59%, with a Credit between 60-79% and a Distinction between 80-100%.

- (iii) THE UNION OF EDUCATIONAL INSTITUTIONS: Norfolk House, Smallbrook Ringway, Birmingham, 5.

The Union, whose members are 21 county councils and 20 county boroughs in the Midlands and south-west and the States of Jersey, was founded in 1895 to help develop further education and to provide technical and commercial syllabuses and examinations. The **School Certificate** (instituted 1958) was designed for candidates below the first 25% but not in the lowest 50% of the ability range. The examinations, which were conducted on a group basis, were discontinued in 1964 when they were replaced by the C.S.E. examinations conducted by the West Midlands Examinations Board (serviced by the Union).

- (iv) THE EAST MIDLAND EDUCATIONAL UNION: 1, Clinton Terrace, Derby Road, Nottingham.

The Union, which consists of local education authorities and further education establishments in Derbyshire, Leicestershire, Lincolnshire, Northamptonshire, Nottinghamshire, Rutland, the Soke of Peterborough and the Isle of Ely, was founded in 1912 and offers examinations in a range of subjects taken by students in technical and art colleges and evening institutions. The **School Certificate** (instituted in 1960 as a temporary measure until the future of examinations at this level became clearer) was intended for secondary modern school pupils who had completed a five-year secondary course. The examinations were on a single-subject basis and there were two standards of performance, pass and credit. They were discontinued in 1964 when they were replaced by the C.S.E. exam-

inations conducted by the East Midland Regional Examinations Board (serviced by the Union).

LOCAL EXAMINATIONS

Before the introduction of the C.S.E. in 1965 a number of purely local examining bodies—local education authorities or groups of schools—conducted leaving examinations for non-G.C.E. pupils alongside or instead of those described in previous sections of this chapter. Some examinations were fourth-year, others fifth-year.

Generally, the objective of these examinations was to give non-G.C.E. pupils an incentive to work well and a form of attainment record to help them in obtaining employment and admission to courses of further education. It was intended that this record, considered together with the school's report on the pupil, should help the Youth Employment Service, potential employers and the principals of further education establishments in assessing the ability of the school-leaver.

In 1958, when enquiries were made by the Beloe sub-committee of the Secondary School Examinations Council, some 30 out of the 146 local education authorities reported that they had schools in their areas conducting examinations leading to some form of certificate and a further 35 that they had schools taking examinations with some form of external assessment. Some of these examinations resulted from the initiative of local groups of teachers; others developed under the leadership of a local education authority. Some were conducted by the local education authorities themselves or by their divisional executives; others were managed by groups of teachers.

It is probable that all or most of these examinations, whose currency was purely local, will be superseded by the C.S.E.

The following examples are given as an illustration of this type of examination.

(i) FIFTH YEAR EXAMINATIONS

The Harrow Schools Leaving Certificate was a single-subject examination for pupils aged 16 in Harrow secondary modern schools; all candidates were required to take English, but failure to pass in it did not preclude a candidate from the award of a certificate. The examinations were set internally by each school taking part and classwork was taken into account. There were three standards, pass, credit and distinction.

The L.C.C. Secondary Schools Certificate (1963-64) was a group examination conducted experimentally in preparation for the

C.S.E. by the former London County Council in association with the Royal Society of Arts. The examinations were intended for pupils at the end of a five-year secondary course in non-grammar schools and their standard was described as just below that of the Royal Society of Arts' School Certificate examinations. The group consisted of English, Mathematics and Science and at least two from among 13 other possible subjects. There were two standards, pass and pass with credit.

(ii) **FOURTH YEAR EXAMINATIONS**

The Keighley Certificate was a group examination conducted by Keighley education committee for pupils leaving school at the end of their fourth secondary year. The examinations were set internally by each of the five schools taking part. Candidates were required to take English and four other subjects, but they could be awarded 'letters of success' for passes in individual subjects if they failed to get enough passes for a certificate. There were three standards, pass, credit and distinction.

The Kingston-upon-Hull Secondary Modern School Certificate was a group examination for pupils leaving secondary modern and all-age schools at the end of their fourth secondary year. 45 schools were concerned. The standard of the examinations was based on what could be expected from pupils at and above the age of 14 and was intended to be such that about 40% of the age-group in the secondary modern and all-age schools should be able to pass and a small proportion to pass at a higher 'credit' level. Candidates were required to take at least four subjects, including English and Arithmetic, but they could be awarded 'letters of success' in individual subjects if they failed to get enough passes for a certificate.

The Reading Education Committee Certificate of Education was a subject examination conducted by Reading education committee in 13 secondary modern schools. It was intended for pupils at the end of the fourth year of their secondary course and its standard was approximate to that required for entry to the second year of the Pre-Senior Course at the Technical College.

The Scunthorpe School-Leaving Certificate was an examination conducted by 15 schools in and around Scunthorpe and suitable in standard for the average secondary modern pupil after working hard for four years.

The South-West Hertfordshire Certificate of Education was a single-subject examination conducted by 13 schools in the Watford area for pupils who, at the end of the fourth year of their

secondary course, had a chance of passing it. The certificate was regarded by the local further education establishments not as an essential qualification but as a guide in selecting students and placing them in courses. There were two standards, pass and distinction.

The Southend-on-Sea Secondary Schools Leaving Certificate was a group examination intended for secondary modern school pupils at the end of their fourth year. Possession of the certificate entitled the holder to automatic entry to certain courses at the Municipal College. Candidates were required to pass in English and Arithmetic and at least two other subjects.

The Wallasey Leaving Certificate was a group examination intended for secondary modern pupils at the end of their fourth year. The two compulsory subjects were English and Arithmetic.

The Widnes Certificate of Education was a single-subject examination intended for secondary modern pupils at the end of their fourth year. The examinations were conducted by eight schools. There were three standards, pass, credit and distinction.

These examinations are typical of the fourth-year school-leaving certificates held in the following areas:

Blackburn; Bolton; Bootle; Brighton (School Examinations Certificate); Burnley (Leaving Certificate); Cheltenham (Forest of Dean); Devon (Leaving Certificate); Dorset (South Dorset School-Leaving Certificate); Edmonton (Borough School-Leavers' Examination); Enfield (Borough School-Leavers' Examination); Gloucester; Heston and Isleworth; Lincolnshire (South-East Lindsey); Liverpool; Luton; Newcastle-under-Lyme; North Middlesex; Nottinghamshire; Nuneaton; Oldham; Oxford (City Leaving Certificate); Salford; Shropshire; Southampton (Secondary Schools Certificate); Staffordshire; Swindon (Secondary Schools Leaving Certificate); Walsall; Warrington; West Bromwich; Wiltshire (Secondary Schools Leaving Certificate).

Part 3

Further Education
Examinations

DEGREE LEVEL COURSES

at the
**NORTH STAFFORDSHIRE
COLLEGE OF TECHNOLOGY
STOKE-ON-TRENT**

Principal: W. E. LEWIS, B.Sc., Ph.D., A.M.I.E.E.

The following full-time and sandwich courses of Graduate standard will be offered in September, 1966:

CERAMICS

B.Sc. in Ceramic Technology
Manager's Diploma in Ceramics
Diploma in Ceramics

CHEMISTRY

Graduateship of the Royal Institute of Chemistry
Licentiatehip of the Royal Institute of Chemistry

ENGINEERING

Higher National Diplomas in Electrical and Mechanical Engineering

MANAGEMENT AND BUSINESS STUDIES

Higher National Diploma in Business Studies
Also of post-graduate standard
Diploma in Management Studies

MINING

National Diploma in Mining

PHYSICS

B.Sc. University of London
Higher National Diploma in Physics

Entry requirements and full details of the above courses, together with the form of application for admission may be obtained from the **Registrar, North Staffordshire College of Technology, College Road, Stoke-on-Trent, Staffs.**

Further Education Examinations

TECHNICAL EXAMINATIONS IN ENGLAND AND WALES

Technical examinations in England and Wales are designed to cater for four broad overlapping categories of candidates, technologists, technicians, craftsmen and operatives. The awards made to technologists are of degree level and now include degrees conferred by the Council for National Academic Awards.

The qualifications obtainable are:

- Degrees of the C.N.A.A.

- University degrees.

- Diploma in Technology and Membership of the College of Technologists.

- Awards made by the National Colleges.

- Professional qualifications.

- College Associateships and Diplomas.

- National Certificates and Diplomas.

- Certificates of the City and Guilds of London Institute and of the Regional Examining Unions.

CHARACTER OF COURSES

Full-time courses are usually more than one year in length; the student's entire time is spent in college.

Short full-time courses are self-contained full-time courses lasting up to 18 weeks ($1\frac{1}{2}$ terms).

Sandwich courses differ from full-time courses in that the period of study in college is interrupted by a period, or periods, of industrial training forming an integral part of the course. The periods are usually about six months; some courses, called 'thick' sandwich courses, include whole years spent in college or in industry. Many students on sandwich courses are employees of the firm in which they do their industrial training and are known as 'works based' students; others, who are not so employed, are known as 'college based' students.

Part-time day-release courses are usually taken by students who are released by their employers for one or two days a week; some of these courses also include periods of evening instruction.

Block-release courses are organised in accordance with a different pattern. These courses also involve attending college for periods averaging 18 weeks or less in a year and may be organised in two ways:

- (a) two or more short periods of full-time study (e.g. in successive sessions), between which students return to their own firm; or
- (b) one or more short periods of full-time study supplemented by study on one or two days a week during another part of the session.

THE PATTERN OF COURSES

The pattern of courses suggested by the 1961 White Paper *Better Opportunities in Technical Education* and now being implemented by the City and Guilds of London Institute, the Regional Examining Unions and the Department of Education and Science is as follows:

For the 15-year-old school-leaver given day release by his employer

- (a) a part-time day course for operatives; or
- (b) a part-time day craft course, in which he will spend two years covering a syllabus which will include the material the 16-year-old school-leaver will usually cover in one year; or
- (c) if he shows promise of becoming a technician, a two-year general course on a part-time day basis from which he will proceed either after one year, to the first year of a technician course (T₁), or, after two years, to the second year of a technician course (T₂) or the first year of a two-year Ordinary National Certificate or Diploma course.

For the 16-year-old school-leaver (or the student who has spent the year between 15 and 16 in a full-time course of general education in a technical college), subject to attainment:

- (a) a part-time day course for operatives; or
- (b) a part-time day craft course (C₁); or
- (c) the first year of a part-time day technician course (T₁); or
- (d) a one-year part-time day general course (G₁), after which he will go on *either* to the second year of a technician course (T₂) *or* to the first year of a two-year

Ordinary National Certificate or Diploma course (O1). In subjects in which there is no preliminary general course, he may either enter a craft course with a view to later promotion if he is suitable or study for G.C.E. 'O' level in order to qualify for entry into an Ordinary National Certificate or Diploma course; or

- (e) if he has four appropriate G.C.E. 'O' level passes, a two-year Ordinary National Certificate or Diploma course.

The 18-year-old school-leaver with the necessary G.C.E. 'A' level passes will normally be aiming at professional qualifications and will take a course leading to a degree, Higher National Diploma or some other advanced award. Intending students with 'A' level passes who cannot take full-time or sandwich courses can enter Higher National Certificate courses, but in most cases they must first spend a year in a special part-time course bringing themselves up to the level in technical subjects covered by the Ordinary National Certificate.

OPERATIVES, CRAFTSMEN AND TECHNICIANS

The technologist is usually a fully qualified professional engineer or applied scientist. The work of design, planning and management for which he is responsible depends upon the support of technicians and involves at lower levels craftsmen and operatives.

Technicians carry out a wide range of responsible jobs involving mathematical, scientific and technical knowledge, considerably more than that needed by a craftsman but less than that needed by a technologist. An able technician may make his way through Ordinary National and Higher National Certificates to professional qualifications; after taking the H.N.C. course the candidate needs a further course of study to satisfy the educational requirements of the professional associations. This may take between one and three years according to the subject.

15- and 16-year-old school-leavers who show promise of being able to qualify as technicians enter diagnostic general courses, lasting one or two years and conducted on a part-time or block-release basis. The general course (G) lasts two years for the 15-year-old school-leaver. General courses lead either to technician courses (T), about four years long and ending in City and Guilds qualifications, or to Ordinary National Certificate or Diploma courses, lasting two years. Following the O.N.C. or O.N.D. a Higher National Certificate or Diploma may be obtained after two years' extra study.

Craftsmen have normally been craft apprentices. 15-year-old school-leavers enter a two-year craft course (C1), one-year for 16-year-olds, at the end of which most will go on to the second year of a three-year craftsmanship course (C2-3) ending in an examination for the old Intermediate or new Craft Certificates of the City and Guilds. At the end of a further two years, candidates who continue their education can take examinations for the City and Guilds Advanced Craft Certificate. Craftsmen with the right aptitude can transfer at suitable points to the more advanced course for the Ordinary National Certificate.

Operatives are principally semi-skilled workers who carry out specific operations involving machinery or plant. Courses are provided to supplement the training given in industry. Courses for operatives, which vary considerably in length, do not usually lead to external examinations, although some thought is now being given to the provision of 'initial qualifications'.

DEGREES OF THE COUNCIL FOR NATIONAL ACADEMIC AWARDS

On 30th September, 1964, the N.C.T.A. was reconstituted under Royal Charter as the *Council for National Academic Awards* (C.N.A.A.),

HATFIELD COLLEGE OF TECHNOLOGY HERTFORDSHIRE

Principal : N. Lindrop, M.Sc., F.R.I.C.

Full Time and Sandwich

DEGREE COURSES

in

Mechanical Engineering
Civil Engineering
Electronics and Electrical Engineering
Aeronautical Engineering
Mathematics

Biology
Applied Chemistry
Business Studies
Economics
Computer Science

All departments provide facilities for research leading to higher degrees and a range of post-graduate courses.

Full particulars from Registrar.

24, Park Crescent, London, W.1), with powers extending to Scotland. This change was made in pursuance of the view expressed in the Robbins Report that students following degree level courses outside the universities should receive an appropriate academic award on successful completion of their courses, that the Colleges of Advanced Technology should have the power to award their own degrees, and that a Council should be set up to administer a scheme of awards.

The Council is an autonomous body and has powers to award degrees, diplomas, certificates and other academic awards to students who have successfully completed courses approved by the Council at educational establishments other than universities or who have successfully carried out research work under the supervision of an educational or research establishment other than a university. The Council will deal with Scottish colleges as well as colleges in England and Wales.

(i) **FIRST DEGREES**

Honours degrees. The Council's first degrees are those of Bachelor of Arts (B.A.) and Bachelor of Science (B.Sc.). When a student gains his degree as the result of a sandwich course, mention of this will be made on the degree certificate. Honours will be classified as follows:

1st Class; 2nd Class, Division I; 2nd Class, Division II;
3rd Class. (The degree may be awarded without Honours in exceptional circumstances.)

The degree certificate will mention the college attended by the student and, in the case of a sandwich course, the industrial organisation where he received his industrial training. The certificate will bear the signature of the principal of the college as well as the Council's seal.

Ordinary degrees. The Council has now decided in the first instance to consider in England and Wales proposed ordinary degree courses which last three years full-time or four years sandwich and have a basic entry requirement of two G.C.E. 'A' level passes or the equivalent. The Council is considering parallel arrangements for Scotland.

Entry requirements. The normal minimum entry requirements for both Honours and Ordinary degree courses are: five G.C.E. passes, including two at 'A' level in appropriate subjects; or four G.C.E. passes, including three at 'A' level in appropriate subjects; or an appropriate O.N.C. or O.N.D. at a good standard; or five S.C.E. passes, including three at the Higher grade; or four S.C.E. passes, all at the Higher grade.

(ii) COURSES LEADING TO THE DIPLOMA IN TECHNOLOGY

From September 1965 students enrolling on courses in establishments other than the new technological universities which formerly led to the Diploma in Technology became candidates for the Council's degrees. Students already enrolled on courses leading to the Dip.Tech. will be eligible for the Council's degree of B.Sc. on completing their studies, but may be granted the Dip.Tech. instead if they wish.

(iii) RETROSPECTIVE AWARD OF THE COUNCIL'S DEGREES

Holders of the Dip.Tech. are eligible on application for the award of the Council's degree of B.Sc., subject only to the condition that a recipient of the Council's degree must cease to use the title

RUGBY COLLEGE

Full-time and Sandwich

DEGREE COURSES

Applied Physics	General Science
Electrical Engineering	Mathematics
Production Engineering	Mechanical Engineering

HONOURS DEGREE courses lead to the award of either the COUNCIL FOR NATIONAL ACADEMIC AWARDS or the UNIVERSITY OF LONDON.

There are some ORDINARY DEGREE courses.

All Departments provide facilities for research leading to higher degrees and research awards are available. There are also one-year post-graduate courses in engineering, computing, applied science, etc.

Students with only one pass at 'A' level may be admitted to COLLEGE DIPLOMA courses leading to professional qualifications.

Accommodation in HALLS OF RESIDENCE or APPROVED LODGINGS is arranged for first year students.

Enquiries welcomed. Telephone: RUGBY 4601 or write
The Registrar, RUGBY COLLEGE OF ENGINEERING
TECHNOLOGY, Eastlands, Rugby. Please quote B.Q.

'Dip.Tech.' Holders of the Dip.Tech. with first class honours, second class honours (1st division), or second class honours (2nd division) will be awarded the Council's degree with the same honours classification. Holders of a Dip.Tech. at pass level will be awarded the Council's degree with third class honours.

(iv) COURSES LEADING TO HONOURS ASSOCIATESHIPS OF SCOTTISH CENTRAL INSTITUTIONS

Certain full-time courses, conducted in accordance with conditions previously approved by the Scottish Education Department, have been recognised retrospectively as leading to the Council's degree of B.Sc. They are listed below.

(v) HIGHER DEGREES

Masters' degrees. The Council has decided to establish the degrees of Master of Arts (M.A.) and Master of Science (M.Sc.) for the successful completion of postgraduate courses of study.

Doctorate of Philosophy. The College of Technologists set the standard of the M.C.T. as equivalent to a university Ph.D. degree. The Council has taken over the work of the College and has decided to replace the award of M.C.T. by the degree of Ph.D. Holders of the award of M.C.T. will be eligible for the retrospective award of the Council's Ph.D. and present M.C.T. candidates may present themselves for the Ph.D. if they wish. For the time being the Council will limit the award of its Ph.D. degree to the kind of original work jointly carried out between a college and an industrial organisation which has up to now led to the award of the M.C.T.

(vi) FORMER DIP.TECH. COURSES NOW LEADING TO C.N.A.A. DEGREES

The courses marked with an asterisk (*) in the following list now lead to the degrees awarded by the new technological universities. The courses at the Scottish Central Institutions formerly led to Honours Associateships. A number of entirely new courses have recently been recognised by the C.N.A.A. for the award of their degrees. These are indicated by a dagger (†).

Aeronautical Engineering (Dip.Tech.(Eng.))

Bristol College of Science and Technology*; Hatfield College of Technology (B.Sc.); Kingston College of Technology (B.Sc.); Lanchester College of Technology (B.Sc.); Loughborough College of Technology*; Northampton College of Advanced Technology*; R.A.F. Technical College, Henlow (Electrical and Mechanical Specialisa-

tion) (B.Sc.) (restricted to R.A.F. officer cadets); Royal Salford College of Advanced Technology*.

Applied Biochemistry (Dip.Tech.)

Chelsea College of Science and Technology (with Applied Pharmacology)*.

Applied Biology (Dip. Tech.)

Bradford Institute of Technology*; Bristol College of Science and Technology*; Brunel College*; Royal Salford College of Advanced Technology*.

Automotive Engineering (Dip.Tech.(Eng.))

Loughborough College of Technology*.

Biology

Portsmouth College of Technology (B.Sc.)†.

Building (Dip.Tech.(Eng.))

Birmingham College of Advanced Technology*; Brighton College of Technology (B.Sc.).

Business Studies

City of London College (B.A. Hons.)†; Ealing Technical College (B.A. Hons. Business Administration); Lanchester College of Technology (B.A. Hons. and Ord.); Woolwich Polytechnic (B.A. Hons.).

HENDON

COLLEGE OF TECHNOLOGY

HONOURS DEGREES

SANDWICH—FOUR YEARS—CNA A

B.Sc:- Electrical Engineering

B.Sc:- Mechanical Engineering

B.Sc:- Applied Chemistry with Economics } Subject to
B.A.:- Business Studies } CNA A approval

FULL TIME—THREE YEARS—LONDON (EXTERNAL)

B.A.:- English

B.A./B.Sc:- Geography

B.Sc:- General

FOR FURTHER PARTICULARS AND APPLICATION FORMS APPLY TO:—

**The Registrar, Hendon College of Technology,
The Burroughs, London, N.W.4.**

Chemical Engineering (Dip.Tech.(Eng.))

Battersea College of Technology*; Bradford Institute of Technology*; Glamorgan College of Technology; Loughborough College of Technology*; Royal Salford College of Advanced Technology*.

Applied Chemistry (Dip.Tech.)

Battersea College of Technology*; Brighton College of Technology (B.Sc.); Bristol College of Science and Technology*; Brunel College*; Hatfield College of Technology (B.Sc.); Lanchester College of Technology (B.Sc.); Liverpool College of Technology (B.Sc.); Royal Salford College of Advanced Technology*; Rutherford College of Technology (B.Sc.); Woolwich Polytechnic (B.Sc.).

Industrial Chemistry (Dip.Tech.)

Bradford Institute of Technology*; Loughborough College of Technology*; Northampton College of Advanced Technology*; Welsh College of Advanced Technology*.

Chemical Technology (Dip.Tech.)

Borough Polytechnic (B.Sc.); Glamorgan College of Technology (B.Sc.); Kingston College of Technology (B.Sc.).

Civil Engineering (Dip.Tech.(Eng.))

Battersea College of Technology*; Birmingham College of Advanced Technology*; Bradford Institute of Technology*; Brighton College of Technology (B.Sc.); Dundee Technical College (4 years full-time, B.Sc.); Glamorgan College of Technology (B.Sc.); Lanchester College of Technology (B.Sc. Hons. and Ord.)†; Northampton College of Advanced Technology*; Nottingham Regional College of Technology (B.Sc.)†; The Polytechnic (B.Sc.); Royal Salford College of Advanced Technology*; Sunderland Technical College (B.Sc.); Woolwich Polytechnic (B.Sc.).

Computer Science

Hatfield College of Technology (B.Sc.)†.

Computer Technology

Wolverhampton and Staffordshire College of Technology (B.Sc.)†.

Electrical Engineering (Dip.Tech.(Eng.))

Battersea College of Technology*; Birmingham College of Advanced Technology*; Borough Polytechnic (B.Sc.); Bradford Institute of Technology*; Brighton College of Technology (B.Sc.); Bristol College of Science and Technology*; Brunel College*; Dundee Technical College (4 years full-time, B.Sc.); Hatfield College of Technology

(B.Sc.); Hendon College of Technology (B.Sc.); Huddersfield College of Technology (B.Sc.)†; Lanchester College of Technology (B.Sc.) and (B.Sc. Ord.)†; Liverpool College of Technology (B.Sc.)†; Loughborough College of Technology*; Northampton College of Advanced Technology*; Nottingham and District Technical College (B.Sc.); The Polytechnic (B.Sc.); Portsmouth College of Technology (B.Sc.); Royal Salford College of Advanced Technology*; Rugby College of Engineering Technology (B.Sc.) and (B.Sc. Ord.)†; Rutherford College of Technology (B.Sc.); Staffordshire College of Technology (B.Sc.); Sunderland Technical College (B.Sc.); Welsh College of Advanced Technology*; Woolwich Polytechnic (B.Sc.).

Electronic Engineering

Staffordshire College of Technology (B.Sc.)†.

Industrial Engineering (Production) (Dip.Tech.(Eng.))

Loughborough College of Technology*.

Instrument and Control Engineering (Dip.Tech.(Eng.))

Northampton College of Advanced Technology*.

Mathematics (Dip.Tech.)

Battersea College of Technology (Technological Mathematics)*; Birmingham College of Advanced Technology (Technological Mathematics)*; Bradford Institute of Technology (Applied Mathematics)*; Brunel College*; Enfield College of Technology (Mathematics for Business) (B.Sc.); Hatfield College of Technology (B.Sc.); Lanchester College of Technology (B.Sc.); Northampton College of Advanced Technology (Applied Mathematics)*; Portsmouth College of Technology (B.Sc.); Royal Salford College of Advanced Technology*; Rutherford College of Technology (B.Sc.); Woolwich Polytechnic (B.Sc.).

Mechanical Engineering (Dip.Tech.(Eng.))

Battersea College of Technology*; Birmingham College of Advanced Technology*; Bradford Institute of Technology*; Brighton College of Technology (B.Sc.); Bristol College of Science and Technology*; Brunel College*; Constantine College of Technology, Middlesbrough (B.Sc.); Dundee Technical College (Mechanical/Production) (4 years full-time, B.Sc.); Hatfield College of Technology (B.Sc.); Hendon College of Technology (B.Sc.); Lanchester College of Technology (B.Sc.) and (B.Sc. Ord.)†; Loughborough College of Technology*; Northampton College of Advanced Technology*; Nottingham

and District Technical College (B.Sc.); Portsmouth College of Technology (B.Sc.); Royal Salford College of Advanced Technology*; Rugby College of Engineering Technology (B.Sc.); Rutherford College of Technology (B.Sc.); Staffordshire College of Technology (Mechanical/Electro-Mechanical Engineering) (B.Sc.); Welsh College of Advanced Technology*; Wolverhampton and Staffordshire College of Technology (B.Sc.); Woolwich Polytechnic (B.Sc.).

Metallurgy (Dip.Tech.)

Battersea College of Technology*; Birmingham College of Advanced Technology*; Brunel College*; Sheffield College of Technology (B.Sc.).

Applied Physics (Dip.Tech.)

Birmingham College of Advanced Technology*; Borough Polytechnic (B.Sc.); Bradford Institute of Technology*; Brighton College of Technology (B.Sc.); Bristol College of Science and Technology*; Brunel College*; Lanchester College of Technology (B.Sc.); Liverpool College of Technology (B.Sc.); Northampton College of Advanced Technology*; Portsmouth College of Technology (B.Sc.); Royal Salford College of Technology*; Rugby College of Engineering Technology (B.Sc.) and (B.Sc. Ord.)†; Sunderland Technical College (B.Sc.); Welsh College of Advanced Technology*; Woolwich Polytechnic (B.Sc.).

Printing

Watford College of Technology (B.Sc.)†.

Production Engineering (Dip.Tech.(Eng.))

Birmingham College of Advanced Technology*; Lanchester College of Technology (B.Sc.) and (B.Sc. Ord.)†; Loughborough College of Technology (Industrial Engineering (Production))*; Northampton College of Advanced Technology*; Welsh College of Advanced Technology*.

Production Technology (Dip.Tech.(Eng.))

Brunel College*.

Quantity Surveying (Dip.Tech.(Eng.))

Brighton College of Technology (B.Sc.).

Statistics (Dip.Tech.)

Bradford Institute of Technology*; Welsh College of Advanced Technology*.

Textile Technology (Dip.Tech.)

Bradford Institute of Technology (General Textile Technology)*; Scottish Woollen Technical College (4 years full-time, B.Sc.).

Other Subjects (Dip.Tech.)**Chemistry**

Birmingham College of Advanced Technology*.

Physics

Battersea College of Technology*.

Physics and Technology of Electronics

Northern Polytechnic (B.Sc.).

Physical Electronics

Rutherford College of Technology (B.Sc.).

Ceramics

North Staffordshire College of Technology (B.Sc.).

Food Technology

National College of Food Technology (B.Sc.).

UNIVERSITY DEGREE COURSES

Before the establishment of the Diploma in Technology the external London degree had been the objective of many of the abler students in further education. In 1962-63 the Robbins Committee found that there were 77 colleges in England and Wales which taught for external degrees, including 48 area colleges; in some of these the amount of degree work was very small. In all cases the aim is an external degree of London University except in the case of students at Sunderland and Southampton Technical Colleges who may work for internal degrees of the Universities of Newcastle and Southampton respectively.

It should be noted that the degrees awarded to students at the Northern Polytechnic, Sir John Cass College, West Ham College of Technology and Woolwich Polytechnic are internal degrees of London University.

External higher degrees of London University may be taken only by students holding a London degree.

External degrees of London University may be obtained in most subjects. Courses in engineering and science are listed below; courses in other subjects appear in the relevant sections of Part 4. Courses at the former C.A.T.'s have not been included.

(i) FIRST DEGREE COURSES IN ENGINEERING

Full-time degree courses extend over three years; sandwich degree courses (during which normally half of each year is spent in college and the other half in industry) extend over four or more years. Before admission to a degree course, a student must satisfy the minimum entrance requirements of the University or College concerned and also the special additional requirements appropriate to

the subject of the degree. Further particulars of these requirements can be obtained from the Secretary, University Entrance Requirements Department, University of London, Senate House, London, W.C.1, or from the Principal of the College concerned.

<u>College</u>	<u>Duration</u>	<u>Final award</u>
Aeronautical Engineering		
Hatfield College of Technology	3 years full-time	B.Sc.(Eng.)
Hull College of Technology	3 years full-time	ditto
Kingston College of Technology	3 years full-time	ditto
Chemical Engineering		
Borough Polytechnic	3 years full-time	ditto
West Ham College of Technology	3 years full-time	ditto
Civil Engineering		
Enfield College of Technology	3 years full-time	ditto
South-West Essex Technical College	3 years full-time	ditto
Medway College of Technology	3 years full-time	ditto
Regent Street Polytechnic	3 years full-time	ditto
Woolwich Polytechnic	3 years full-time	ditto
Nottingham and District Technical College	4 years sandwich	ditto
Plymouth College of Technology	3 years full-time	ditto
Portsmouth College of Technology	3 years full-time	ditto
Staffordshire College of Technology	3 years full-time	ditto
Sunderland Technical College	3 years full-time	B.Sc. (Applied Science) —Newcastle
Kingston-upon-Thames College of Technology	3 years full-time	B.Sc.(Eng.)
West Ham College of Technology	3 years full-time	ditto
Electrical Engineering		
Bournemouth Municipal College of Technology and Commerce	3 years full-time	ditto
South-West Essex Technical College	3 years full-time	ditto
Hatfield College of Technology	3 years full-time	ditto
Hull College of Technology	3 years full-time	ditto
Medway College of Technology	3 years full-time	ditto
Regent Street Polytechnic	3 years full-time	ditto
Woolwich Polytechnic	3 years full-time	ditto
Enfield College of Technology	4 years sandwich	ditto
Rutherford College of Technology	4 years sandwich	ditto
Nottingham and District Technical College	4 years full-time	ditto
Oxford College of Technology	3 years full-time	ditto
Plymouth College of Technology	3 years full-time	ditto
Portsmouth College of Technology	3 years full-time	ditto
Sunderland Technical College	3 years full-time	B.Sc. (Applied Science) —Newcastle
Kingston-upon-Thames College of Technology	3 years full-time	B.Sc.(Eng.)
Rugby College of Engineering Technology	4 years sandwich	ditto
Staffordshire College of Technology	3 years full-time	ditto
Swindon College	3 years full-time	ditto
West Ham College of Technology	3 years full-time	ditto

<u>College</u>	<u>Duration</u>	<u>Final award</u>
Marine Engineering		
Sunderland Technical College	3 years full-time	B.Sc. (Applied Science) —Newcastle
Mechanical Engineering		
Bournemouth Municipal College of Technology and Commerce	3 years full-time	B.Sc. (Eng.)
South-West Essex Technical College	3 years full-time	ditto
North Gloucestershire Technical College	3 years full-time	ditto
Hatfield College of Technology	3 years full-time	ditto
Hull College of Technology	3 years full-time	ditto
Medway College of Technology	3 years full-time	ditto
Regent Street Polytechnic	3 years full-time	ditto
Woolwich Polytechnic	3 years full-time	ditto
Luton College of Technology	4 years sandwich	ditto
Enfield College of Technology	4 years sandwich	ditto
Rutherford College of Technology	4 years sandwich	ditto
Nottingham and District Technical College	4 years sandwich	ditto
Oxford College of Technology	3 years full-time	ditto
Plymouth College of Technology	3 years full-time	ditto
Portsmouth College of Technology	3 years full-time	ditto
Sunderland Technical College	3 years full-time	B.Sc. (Applied Science) —Newcastle
Kingston-upon-Thames College of Technology	3 years full-time	B.Sc. (Eng.)
Rugby College of Engineering Technology	5 years sandwich	ditto
Staffordshire College of Technology	3 years full-time	ditto
West Ham College of Technology	3 years full-time	ditto
The College, Swindon	3 years full-time	ditto
Metallurgy		
Sir John Cass College, London	3 years full-time	ditto
Staffordshire College of Technology	3 years full-time	ditto

(ii) FIRST DEGREE COURSES IN SCIENCE

B.Sc. (Special) Degree Courses**Botany**

Cambridgeshire College of Arts and Technology	3 years full-time	B.Sc. (Special) Botany
Portsmouth College of Technology	3 years full-time	ditto
South-East Essex Technical College	3 years full-time	ditto

Chemistry

Brighton College of Technology	3 years full-time	B.Sc. (Special) Chemistry
South-East Essex College of Technology	3 years full-time	ditto

<u>College</u>	<u>Duration</u>	<u>Final award</u>
Chemistry (continued)		
Northern Polytechnic	3 years full-time	B.Sc. (Special)
	4 years sandwich	Chemistry
Regent Street Polytechnic	3 years full-time	ditto
Sir John Cass College	3 years full-time	ditto
Woolwich Polytechnic	3 years full-time	ditto
Oxford College of Technology	3 years full-time	ditto
West Ham College of Technology	3 years full-time	ditto
Geography		
Cambridgeshire College of Arts and Technology	3 years full-time	B.Sc. (Special)
		Geography
Hendon College of Technology	3 years full-time	ditto
Portsmouth College of Technology	3 years full-time	ditto
Geology		
Kingston College of Technology	3 years full-time	B.Sc. (Special)
		Geology
Mathematics		
South-East Essex Technical College	3 years full-time	B.Sc. (Special)
		Mathematics
Constantine College of Technology, Middlesbrough	3 years full-time	ditto
Northern Polytechnic	3 years full-time	ditto
Regent Street Polytechnic	3 years full-time	ditto
Sir John Cass College	3 years full-time	ditto
Woolwich Polytechnic	3 years full-time	ditto
Rutherford College of Technology	3 years full-time	ditto
Portsmouth College of Technology	3 years full-time	ditto
Kingston-upon-Thames College of Technology	3 years full-time	ditto
Rugby College of Engineering Technology	3 years full-time	ditto
West Ham College of Technology	3 years full-time	ditto
Physics		
South-East Essex College of Technology	3 years full-time	B.Sc. (Special) Physics
Northern Polytechnic	3 years full-time	ditto
	4 years sandwich	ditto
Regent Street Polytechnic	3 years full-time	ditto
Sir John Cass College	3 years full-time	ditto
Woolwich Polytechnic	3 years full-time	ditto
Portsmouth College of Technology	3 years full-time	ditto
West Ham College of Technology	3 years full-time	ditto
Zoology		
Cambridgeshire College of Arts and Technology	3 years full-time	B.Sc. (Special)
		Zoology
South-East Essex College of Technology	3 years full-time	ditto
Regent Street Polytechnic	3 years full-time	ditto
Sir John Cass College	3 years full-time	ditto
Portsmouth College of Technology	3 years full-time	ditto
West Ham College of Technology	3 years full-time	ditto

B.Sc. (General) Degree Courses

Before admission to a B.Sc. (General) Degree Course, a student must satisfy the minimum entrance requirements of the College concerned and also the special additional requirements appropriate to the course. Further particulars of these requirements can be obtained from the Secretary, University Entrance Requirements Department, University of London, Senate House, London, W.C.1, or from the Registrar or Principal of the College concerned.

The course lasts three years full-time. Three subjects chosen from one list are taken in the first year, and two subjects chosen from another list in the second and third years. Not all colleges offer the same subjects. Details should be obtained from the Principal of the College concerned.

<u>College</u>	<u>Final award</u>
Bournemouth Municipal College of Technology and Commerce	B.Sc. (General)
Slough College	ditto
Cambridgeshire College of Arts and Technology	ditto
Cornwall Technical College	ditto
Lanchester College of Technology	ditto
Croydon Technical College	ditto
Derby and District College of Technology	ditto
South-East Essex College of Technology	ditto
South-West Essex Technical College	ditto
Gloucester Technical College	ditto
North Gloucestershire Technical College	ditto
Hatfield College of Technology	ditto
Hull College of Technology	ditto
Ipswich Civic College	ditto
Medway College of Technology	ditto
Leicester College of Technology	ditto
Liverpool College of Technology	ditto
Northern Polytechnic	ditto
Norwood Technical College	ditto
Regent Street Polytechnic	ditto
Sir John Cass College	ditto
Woolwich Polytechnic	ditto
Luton College of Technology	ditto
John Dalton College of Technology	ditto
Constantine College of Technology	ditto (Part I)
Hendon College of Technology	B.Sc. (General)
Rutherford College of Technology	ditto
Norwich City College	ditto
Nottingham and District Technical College	ditto
Oxford College of Technology	ditto
Plymouth College of Technology	ditto
Portsmouth College of Technology	ditto
North Staffordshire College of Technology	ditto
Sunderland Technical College	ditto
Kingston College of Technology	ditto
Rugby College of Engineering Technology	ditto
West Ham College of Technology	ditto
Wolverhampton and Staffordshire College of Technology	ditto

DIPLOMA IN TECHNOLOGY AND MEMBERSHIP OF THE COLLEGE OF TECHNOLOGISTS

In 1955 the Minister of Education set up the **National Council for Technological Awards** (N.C.T.A.). This was an independent, self-governing body whose function was to create and administer technological awards of high standing as an alternative to external degrees of London University, courses for which had hitherto provided the only opportunity for degree level work outside the universities. The new awards were to have a national currency and were to be available for students in technical colleges who successfully completed courses recognised by the Council. The first qualification created by the Council was the **Diploma in Technology**. Later, in May 1959, the Council established the College of Technologists to administer the award of **Membership of the College of Technologists**.

(i) THE DIPLOMA IN TECHNOLOGY (first awarded in September 1958)

The award. Courses leading to the Dip.Tech. were equivalent in standard to honours degree courses of a British university. The award was denoted by 'Dip.Tech.(Eng.)' for engineering subjects and by 'Dip.Tech.' for other technologies. The Dip.Tech. had three classes, first and second class honours and pass.

Courses. The minimum length of a course was four years including industrial training. Courses were arranged on a sandwich basis, comprising alternating periods in a college and in industry, or on a basis of at least three years' full-time academic study, together with at least one year of industrial training during the course. Courses were meant to: (i) include a thorough education in science and technology and their application to development and design; (ii) help fit students for their future responsibilities. The courses had also to include liberal studies and some instruction in the principles of industrial organisation. Before recognising a course the Council studied the arrangements for conducting it, e.g. teaching staff, accommodation, equipment and organisation of industrial training.

Admission of students. The minimum age for admission to courses was normally 18. The minimum academic requirements were either G.C.E. passes in five subjects, including at least two appropriate subjects at 'A' level, or an appropriate Ordinary National Certificate or Diploma at a good standard.

- (ii) MEMBERSHIP OF THE COLLEGE OF TECHNOLOGISTS (M.C.T.)
(instituted 1959; first awarded 1962)

The award. The M.C.T. was instituted to encourage suitably qualified men and women to undertake further study beyond the level of the Diploma in Technology and to carry out original research. A main object of the award was to stimulate and give recognition to the investigation of problems related to the needs of industry; and students were required to remain in contact with industry or with commercial laboratories. The integration of academic study and industrial training was an important feature of courses leading to the Dip.Tech. and the Council felt that a similar collaboration between industry and college should be extended into the post-diploma field.

Courses. The award was normally made for a programme of work satisfactorily carried out jointly in industry and at a college. 'Industry' includes research groups and associations, Government establishments and similar agencies. The programme might be concerned with any technological aspects of industrial activity, e.g. research, development, design, production or market investigation; and the nature of the programme had to be such that it was likely to result in a useful contribution to technological knowledge and that it required industrial experience and academic study extending over a substantial period. The approximate period suggested by the College of Technologists was three years, provided that a large part of this time was spent on work acceptable for Membership of the College.

Admission of candidates. Candidates for the M.C.T. were required to have reached a high standard before registration and had normally to have either a Dip.Tech. with first or second class honours or a good honours degree of a British university, together with at least a year's appropriate industrial experience. Applicants without these qualifications were considered on their merits.

The department of the college in which the candidate proposed to undertake his programme had already to be conducting at least one course leading to the Dip.Tech. Exceptions might be made in the case of departments of a high standing conducting courses of a standard equivalent to those leading to the Dip.Tech. and having strong links with industry at the postgraduate or post-diploma level.

Areas of study. The areas in which M.C.T. candidates have worked are as follows:

Aeronautical Engineering; Chemical Engineering; Civil Engineering; Mechanical Engineering; Electrical Engineering; Chemistry; Biology; Physics; Metallurgy; Textiles.

AWARDS MADE BY THE NATIONAL COLLEGES

The colleges are:

National College of Agricultural Engineering; National College of Food Technology; National Foundry College; National College for Heating, Ventilating, Refrigeration and Fan Engineering; National Leathersellers' College; National College of Rubber Technology.

The awards they make are dealt with separately in the appropriate sections of Part 6.

COURSES FOR PROFESSIONAL QUALIFICATIONS

Most students in further education who go on to become members of professional institutions in science and technology obtain partial or total exemption from the institutions' examinations by means of degrees, Higher National Diplomas, associateships or other exempting qualifications. However, some professional qualifications are obtained on completion of specific courses of direct preparation. Over two-thirds of the students who obtain H.N.D. and about a third of those attaining H.N.C. subsequently obtain a professional qualification. For most of the professions students are required to take extra subjects (called 'endorsements') and also to obtain responsible experience in industry. Until recently a larger proportion of those holding the H.N.C. obtained professional membership but, as the examination requirements of the institutions have been raised, it has become more difficult to obtain membership entirely by part-time study. Courses are conducted for various professional examinations at many institutions; further details may be found under the relevant fields in Part 6.

COLLEGE ASSOCIATESHIPS AND DIPLOMAS

Some colleges offer their own Associateship or Diploma courses in engineering, science and commerce. The awards are usually equivalent to honours or pass degrees. In many of the former Colleges of Advanced Technology these courses (marked with an asterisk (*) in the following list) will lead to university degrees. Courses at other institutions may be recognised as suitable preparation for degrees of the Council for National Academic Awards. Most of the courses enable students to obtain partial or total exemption from professional examinations; some lead to the Higher National Diploma with a fourth year for a college diploma. Courses are also offered for college Certificates at a lower level.

<u>College</u>	<u>Duration</u>	<u>Final award</u>
Aeronautical Engineering		
Hatfield College of Technology	3 years full-time	College Diploma
Automotive Engineering		
Loughborough College of Technology	4 years sandwich	College Diploma*
Chemical Engineering		
Birmingham College of Advanced Technology	4 years sandwich	College Associateship and Degree*
Constantine College of Technology, Middlesbrough	3 years sandwich	College Higher Diploma
West Ham College of Technology	4 years sandwich	College Diploma
	5 years sandwich	College Associateship
Glamorgan College of Technology	4 years sandwich	ditto
Civil Engineering		
Loughborough College of Technology	3 years full-time	College Diploma*
Brighton College of Technology	3 years full-time	College Diploma
Lanchester College of Technology	4 years sandwich	ditto
Mid-Essex Technical College	4 years sandwich	ditto
South-West Essex Technical College	4 years sandwich	ditto
Hatfield College of Technology	3 years full-time	ditto
Medway College of Technology	3 years full-time	ditto
Leeds College of Technology	3 years full-time	ditto
Brixton School of Building	5 years sandwich	ditto
Regent Street Polytechnic	3 years full-time	ditto
Constantine College of Technology, Middlesbrough	4 years sandwich	ditto
Enfield College of Technology	4 years sandwich	ditto
Willesden Technical College	4 years sandwich	ditto
Nottingham and District Technical College	4 years sandwich	ditto
Oxford College of Technology	4 years sandwich	ditto
Plymouth College of Technology	3 years full-time	ditto
Portsmouth College of Technology	3 years full-time	ditto
	4 years sandwich	ditto
Reading Technical College	4 years sandwich	ditto
Sheffield College of Technology	4 years sandwich	ditto
Kingston College of Technology	3 years full-time	ditto
West Ham College of Technology	3 years full-time	ditto
Glamorgan College of Technology	4 years sandwich	College Associateship
Electrical Engineering		
Brighton College of Technology	3 years full-time	College Diploma
Derby and District College of Technology	4 years sandwich	ditto
Mid-Essex Technical College	4 years sandwich	ditto
Huddersfield College of Technology	4 years sandwich	College Associateship
Leeds College of Technology	24 weeks	College Diploma
Regent Street Polytechnic	3 years full-time	ditto
Southall Technical College	3 years sandwich	ditto
Twickenham College of Technology	4 years sandwich	ditto
Nottingham and District Technical College	4 years sandwich	ditto
Rotherham College of Technology	1 year full-time	College Associateship

<u>College</u>	<u>Duration</u>	<u>Final award</u>
Electrical Engineering (continued)		
Rugby College of Engineering and Technology	3 years full-time	College Diploma
West Ham College of Technology	3 years full-time	ditto
Glamorgan College of Technology	4 years sandwich	College Associateship
Foundry Technology		
Loughborough College of Technology	4 years sandwich	College Associateship*
Gas Engineering		
Westminster Technical College	4 years sandwich	College Diploma
Enfield College of Technology	4 years sandwich	ditto
Mechanical Engineering		
Birmingham College of Advanced Technology	4 years sandwich	College Associateship*
Loughborough College of Technology	4 years full-time	College Diploma in Automobile Engineering*
	4 years sandwich	College Diploma in Automotive Engineering*
	4 years sandwich	College Diploma in General Engineering*
	4 years sandwich	College Diploma in Foundry Work
Bolton Technical College	2 years full-time	College Diploma in Automobile Engineering
	2 years full-time	College Diploma in Automobile Engineering
Brighton College of Technology	3 years full-time	College Diploma
Derby and District College of Technology	5 years sandwich	College Diploma for British Railways College
Huddersfield College of Technology	4 years sandwich	College Associateship
Leeds College of Technology	24 weeks	College Diploma
Borough Polytechnic	3 years full-time	ditto
Regent Street Polytechnic	3 years full-time	ditto
Luton College of Technology	4 years sandwich	ditto
Manchester College of Science and Technology	2 years full-time	College Diploma in Machine Tool Design
Hendon College of Technology	3½ years sandwich	College Diploma
Twickenham College of Technology	4 years sandwich	ditto
Nottingham and District Technical College	4 years sandwich	ditto
Oxford College of Technology	4 years sandwich	College Diploma in Mechanical/Automobile Engineering
Rotherham College of Technology	1 year full-time	College Associateship
Staffordshire College of Technology	1 year full-time	College Diploma
Kingston College of Technology	3 years sandwich	ditto
West Ham College of Technology	3 years full-time	ditto
Glamorgan College of Technology	4 years sandwich	ditto
Metallurgy		
Sir John Cass College	2 years full-time	ditto
Sheffield College of Technology	1 year full-time	ditto
Wednesbury County Technical College	5 years sandwich	ditto

<u>College</u>	<u>Duration</u>	<u>Final award</u>
Production Engineering		
Nottingham and District Technical College	4 years sandwich	ditto
Structural Engineering		
Royal College of Advanced Technology, Salford	3 years full-time	College Associateship
Brighton College of Technology	3 years full-time	College Diploma
South-West Essex Technical College	4 years sandwich	ditto
Brixton School of Building	4 years sandwich	ditto
Hammersmith College of Art and Building	4 years sandwich	ditto
Constantine College of Technology	4 years sandwich	ditto
Twickenham College of Technology	4 years sandwich	ditto
Willesden Technical College	3 years full-time	ditto
Telecommunications (including Electronics)		
Royal College of Advanced Technology, Salford	3 years full-time	College Associateship in Electronics*
Bolton Technical College	3 years full-time	College Diploma in Electronics
Northern Polytechnic	3 years full-time	College Diploma
Norwood Technical College	3 years full-time	ditto
Regent Street Polytechnic	3 years full-time	ditto
Ceramics		
North Staffordshire College of Technology	1 year full-time	College Diploma in Pottery Design
Chemistry		
Birmingham College of Advanced Technology	3 years full-time	College Associateship*
Bradford Institute of Technology	3 years full-time	Colour Chemistry and Dyeing Materials*
	4 years full-time	Materials Science and Technology*
	3 years full-time	College Diploma in Industrial Chemistry*
Loughborough College of Technology	3 years full-time	College Diploma in Industrial Chemistry*
Derby and District College of Technology	2 years sandwich	College Diploma in Dry Cleaning
Constantine College of Technology	3 years sandwich	College Higher Diploma
Nottingham and District Technical College	4 years full-time	College Diploma in Dyeing and Finishing
Stoke-on-Trent College of Technology	3 years full-time	College Associateship
Mathematics		
Bristol College of Science and Technology	4 years sandwich	College Diploma*
Leicester College of Technology	4 years sandwich	College Diploma in Industrial Mathematics
	2 years full-time	College Certificate in Industrial Mathematics

<u>College</u>	<u>Duration</u>	<u>Final award</u>
Mathematics (continued)		
Constantine College of Technology	2 years full-time	College Diploma in Mathematics, Statistics and Computers
Wolverhampton and Staffordshire College of Technology	3 years sandwich	College Diploma in Computer Technology
Glamorgan College of Technology	3 years sandwich	College Diploma for Mathematics in Industry
Ophthalmic Optics		
Birmingham College of Advanced Technology	3 years full-time	College Diploma*
Bradford Institute of Technology	3 years full-time	ditto*
Northampton College of Advanced Technology	3 years full-time	ditto*
Welsh College of Advanced Technology	3 years full-time	ditto*
Applied Optics		
Manchester College of Science and Technology	3 years full-time	College Associateship
Physics		
Mid-Essex Technical College	4 years sandwich	ditto

Hotel Keeping and Catering. A list of College Diploma and Certificate courses in Hotel Keeping and Catering is given in Part 6.

<u>College</u>	<u>Duration</u>	<u>Final award</u>
Boot and Shoe Manufacture		
Leicester College of Technology	2 years full-time	College Diploma in Boot and Shoe Manufacture
	3 years full-time	Diploma in Shoe Design and Fashion Co-ordination
Cordwainers Technical College	3 years full-time	Associateship of the British Boot and Shoe Institution and College Diploma
Northampton (Northants) College of Technology	3 years full-time	College Diploma in Shoe Technology
Norwich City College	2 years full-time	Associateship of the British Boot and Shoe Institution
Strode Technical College	3 years sandwich	ditto
Leather Manufacture		
Northampton (Northants) College of Technology	3 years full-time	College Diploma in Leather Manufacture

<u>College</u>	<u>Duration</u>	<u>Final award</u>
Printing		
Watford College of Technology	3 years full-time	College Diploma in General Printing
	3 years full-time	College Diploma in Typographic Design
Maidstone College of Art	2 years full-time	College Diploma in Design for Printing
Leeds College of Technology	3 years full-time	College Diploma in Printing
London College of Printing	3 years full-time	College Diploma in Administration
	3 years full-time	College Diploma in Printing Technology
	2 years full-time	College Higher Diploma in Printing
	2 years full-time	College Certificate in General Printing
Manchester College of Science and Technology	3 years full-time	College Associateship in Printing
	2 years full-time	College Certificate in Graphical Reproduction
Oxford College of Technology	3 years full-time	College Diploma in Book and Magazine Publishing and Production
Textiles		
Bradford Institute of Technology	3 years full-time	College Diploma in Preparing, Combing and Spinning
	3 years full-time	College Diploma in Cloth Manufacture
	3 years full-time	College Diploma in Textile Design and Colour
Blackburn Municipal Technical College	3 years full-time	College Associateship, A.T.I. Part I
Bolton Technical College	3 years full-time	College Diploma, A.T.I. Part I
Huddersfield College of Technology	3 years full-time	College Diploma in Textile Technology, A.T.I. Part I
	3 years full-time	College Diploma in Cloth Manufacture
	2 years full-time	College Diploma in Yarn Manufacture
Leeds College of Technology	2 years full-time	College Diploma in General Clothing Technology
Leicester College of Technology	3 years full-time	College Diploma in Textiles
Hollings College (Manchester) for the Food and Fashion Industry	3 years full-time	College Diploma in Clothing Technology
Nottingham and District Technical College	3 years full-time	College Diploma in Textiles
Salford Technical College	3 years full-time	College Diploma in Textile Distribution

<u>College</u>	<u>Duration</u>	<u>Final award</u>
College Certificate Courses in Textiles (excluding design)		
Bradford Institute of Technology	2 years full-time	College Certificate in Cloth Manufacture
	2 years full-time	College Certificate in Preparing, Combing and Spinning
Derby and District College of Technology	2 years sandwich	College Certificate in Narrow Woven Fabric Manufacture
Huddersfield College of Technology	1 year full-time	College Certificate in Textile Technology for Merchants
City of London College for the Distributive Trades	1 year full-time	College Certificate in Textile Distribution

NATIONAL CERTIFICATES AND DIPLOMAS

The National Certificate system was begun in 1921 to provide qualifications for trained technicians and professional men, mainly in the fields of science and engineering. National Diplomas and Certificates are awarded jointly by the Department of Education and Science, the Scottish Education Department and the professional institutions concerned. There are two grades, Ordinary and Higher, for which the courses offered are intended to be consecutive. Diplomas are awarded after full-time study and Certificates after part-time study.

Certificates and Diplomas at Ordinary level approach G.C.E. 'A' level in comparable subjects. A Higher National Diploma approaches degree standard; a Higher National Certificate is of a slightly lower standard in a narrower range of subjects.

All National Diplomas and Certificates, at both grades, are administered by Joint Committees representing the Department, the professional institutions and technical college teachers. The Committees maintain standards by exercising a general oversight over the content of courses and by assessing examinations, worked scripts and laboratory work. The qualifications are widely recognised by employers in the United Kingdom and overseas in the light of this.

Up to the war Diploma and Certificate courses came to be looked on increasingly as a means of qualifying for professional status by securing exemption from the professional institutions' examinations. They are still used for this purpose, and many institutions accept the higher grades, especially with post-certificate endorsements. It is expected, however, that with the development of further education courses the emphasis in these examinations will fall increasingly on higher technician training.

(i) NATIONAL DIPLOMAS

The Ordinary National Diploma (O.N.D.) is awarded to students who have successfully completed a two-year full-time or a two- or three-year sandwich course. The minimum age of entry is 16, and the minimum entry requirements, for students other than those who have completed the appropriate G and T courses, are usually four passes in appropriate subjects at G.C.E. 'O' level or C.S.E. grade 1, but in some cases a lower entry standard may be accepted. The O.N.D. can lead to H.N.D. or Diploma in Technology courses but it is a sound qualification in its own right and for those who do not wish to go further it is accepted by employers as a good qualification for many types of technician in industry.

O.N.D. courses are available in the following subjects:

Building (revised as Construction, 1965); Business Studies; Engineering; Nautical Science; Sciences; Textiles.

The Higher National Diploma (H.N.D.) is awarded to students who have successfully completed two or three years' full-time or three years' sandwich study. The final standard is roughly comparable with that of a university pass degree and it gives some measure of exemption from the qualifying examinations of professional institutions, but further study may be required before their academic requirements are completely satisfied. The minimum entry requirement is normally five G.C.E. passes, including one at 'A' level, or five passes in the Scottish Certificate of Education, including two at Higher Grade, or an O.N.C. or O.N.D.

H.N.D. courses are available in the following subjects:

Biological Sciences; Building; Business Studies; Hotel Keeping and Catering; Chemistry; Applied Chemistry; Chemical Engineering; Aeronautical Engineering; Electrical Engineering; Foundry Technology; Mechanical Engineering; Applied Physics; Mining; Metallurgy; Production Engineering.

(ii) NATIONAL CERTIFICATES

Ordinary National Certificate (O.N.C.) is being reorganised as a consequence of the 1961 White Paper, *Better Opportunities in Technical Education*. The course, which is part-time, is being shortened from three to two years and more rigorous entry qualifications, in the shape of four G.C.E. 'O' level passes or C.S.E. grade 1 passes or the completion of a special general course in a technical college, are being imposed. O.N.C. courses are intended for apprentices who have the ability to follow a reasonably academic course. The O.N.C. is of about the same standard as the O.N.D. but involves fewer subjects because the course for it is part- and not full-time.

The courses provide a good technical education in themselves and are also a sound preparation for further study as they can lead to H.N.C. and H.N.D. and C.N.A.A. degree courses.

O.N.C. courses are offered in the following subjects:

Building (revised as Construction, 1965); Business Studies; Chemistry (withdrawn 1965); Applied Chemistry (withdrawn 1965); Engineering; Applied Physics (withdrawn 1965); Metallurgy (withdrawn 1965); Mining; Naval Architecture; Science; Textiles.

Higher National Certificate (H.N.C.) is normally taken part-time and requires at least two years' part-time study beyond the O.N.C. It is of roughly the same standard as the H.N.D. but involves the study of a rather narrower range of subjects to the same level. It also carries some exemption from the requirements of some professional institutions, but in many cases less than the longer Diploma course. The entry requirement is usually the O.N.C. or O.N.D. It is possible for students to enter with 'A' level G.C.E. passes but they may need a preparatory 'bridge' course to cover technological subjects taken in O.N.D. and O.N.C. courses but not taken in preparation for the G.C.E.

H.N.C. courses are available in the following subjects:

Biological Sciences; Building; Business Studies; Chemistry; Applied Chemistry; Chemical Engineering; Applied Physics; Aeronautical Engineering; Civil (including Gas) Engineering; Electrical Engineering; Foundry Technology; Mechanical Engineering; Metallurgy; Mining; Naval Architecture; Production Engineering; Textiles.

Endorsement Certificates to National Certificates and Diplomas are awarded on the successful completion of approved supplementary courses which are not required as a basic qualification for the award in the main subject. The possession of the H.N.D. or H.N.C. with suitable endorsements can lead to graduate membership of many professional bodies.

CERTIFICATES OF THE CITY AND GUILDS OF LONDON INSTITUTE AND OF THE REGIONAL EXAMINING UNIONS

The City and Guilds of London Institute (76, Portland Place, London, W.1) is a national body and has conducted technological examinations since 1878. It now provides numerous schemes for courses and examinations, designed to meet the defined needs and categories of industrial and other employees. The range of schemes offered extends from operatives to the threshold of management.

It awards *final* certificates at craft level in all the branches of technical education with which it is concerned. The Regional Examining Unions conduct examinations up to, but not including, the final certificates of the City and Guilds and also examinations for the Ordinary and Higher National Certificates. A student going to a technical college in the area of a particular examining union will take its examinations up to old Intermediate or new Craft level and any stages beyond, but in the last year he must take the final examination of the City and Guilds. The Unions' examinations at craft and technician level are based on syllabuses which are acceptable to the Institute.

CITY AND GUILDS OF LONDON INSTITUTE AWARDS

The traditional pattern of City and Guilds awards was until recently:

An Intermediate Certificate taken after a two- or three-year course;

A Final Certificate taken after two more years; and

Full Technological Certificate, taken after further specific courses.

The new pattern is:

A Craft Certificate (in most courses) taken after two or three years.

An Advanced Craft Certificate taken after two more years.

A Full Technological Certificate in some subjects. It may be awarded to a candidate who gives evidence of breadth of study apart from his technology; or in respect of continued study, including more advanced work in his technology and also in subjects such as the elements of foremanship or management. Candidates must be over 21.

The Institute offers examination schemes in the following subject areas:

General Courses (for intending technicians); Agriculture and Agricultural Engineering; Mining and Quarrying; Food Technology and Catering; Chemicals and Allied Industry; Metal Manufacture; Electrical Engineering; Mechanical Engineering; Shipbuilding and Marine Engineering; Vehicles; Textiles; Building; Clothing, Footwear and Leather; Furniture and Timber; Paper and Printing; Building; Gas, Electricity, Water; Distributive Trades; Professional, Scientific and Miscellaneous Subjects; Domestic Subjects.

Insignia Award in Technology (C.G.I.A.) is open to can-

didates over 30 who have a Full Technological Certificate or a suitable alternative qualification, have had at least seven years' post-apprenticeship industrial experience and who satisfy the Institute as to their ability, experience and knowledge.

REGIONAL EXAMINING UNION AWARDS

The four Regional Examining Unions are:

Union of Lancashire and Cheshire Institutes; East Midland Educational Union; Union of Educational Institutions; Northern Counties Technical Examinations Council.

The Union of Lancashire and Cheshire Institutes (U.L.C.I.) holds further education examinations ranging from the elementary stages to work of Higher National Certificate standard. They are designed to meet the needs of students engaged in industrial, commercial and domestic occupations. Students who, on entry to part-time classes, have not acquired the standard necessary for the various senior courses are offered pre-senior courses. The senior courses are of two kinds: general courses dealing with the broader aspects of industry and commerce and others which relate to a single trade or occupation.

The Union's scheme of courses is as follows:

- (a) Pre-Senior Commercial—one year.
- (b) General Courses—one or two years.
- (c)
 - (i) Senior Technical and Commercial Courses leading to O.N.C.—two or three years.
 - (ii) Senior Craft and Workshop Courses—two, three, four or five years.
 - (iii) Senior Industrial Art Courses—two, three, four or five years.
 - (iv) Senior Domestic and Catering Courses—one, two, three or four years.
- (d) Advanced Technical (leading to H.N.C.) and Commercial Courses—two years.

Certain courses are recognised for the award of National Certificates and certain courses are equivalent to corresponding courses of the City and Guilds in relation to the Institute's Certificates.

The certificates awarded on the results of the Union's examinations are as follows:

- (a) Unendorsed Certificates (awarded by the Union).
- (b) Two-part certificates awarded by the City and Guilds in conjunction with the Union.
- (c) Ordinary and Higher National Certificates (awarded in conjunction with the Department of Education and Science by the appropriate professional associations).

The Pre-Senior, Technical and Industrial Art Courses of Senior Grade lead to *grouped certificates*, except in certain cases. To obtain a grouped certificate the candidate must pass in all the prescribed subjects of the course in the same year. Grouped course certificates are also awarded in the advanced technical courses, the senior and advanced commercial courses, the domestic, bakery and catering courses and the senior industrial art courses. *Single-subject certificates* are issued in respect of:

technical subjects of advanced grade; commercial subjects of senior and advanced grades; domestic subjects of senior grade; natural science and other extra-course subjects; general courses; shop display course, stage I.

The Union's certificates are graded as follows:

(a) All single-subject courses except General courses:

Distinction	85%
Credit	65%
Pass	40%

(b) General courses (Second Year):

Credit	55%
Pass	40%

(c) Senior and advanced group courses:

Pass 40% in each subject.

These certificates are not classified, but the class of success gained in the individual subjects of the course is indicated on the certificate as follows:

Distinction	85%
Credit	65%
Pass	40%

The East Midland Educational Union (1, Clinton Terrace, Derby Road, Nottingham), which was founded in 1912, is an examining body for part-time day and evening students and holds the following examinations, based on syllabuses prepared by the Union:

- (a) Pre-Senior Grouped Courses.
- (b) General Courses in Engineering, Mining, Construction and Science.
- (c) Senior and Advanced Examinations in Art, Building, Commercial and Literary Subjects, Domestic Subjects, Engineering, Mining, Pure Science and Textiles.

Certificates are awarded to successful candidates. The Union's examinations are recognised in connection with schemes for National Certificates, by the City and Guilds of London Institute and by the Mining Qualifications Board.

The Union of Educational Institutions (Norfolk House,

Smallbrook Ringway, Birmingham, 5) offers examinations for National Certificates and a number of its examinations are recognised by the City and Guilds of London Institute as part qualifications for the award of the Full Technological Certificate to candidates who have passed the Institute's own examinations.

The following certificates are awarded:

- (a) Introductory Course Certificates. Pass (40%) Certificates are awarded to qualified candidates at the end of each year of each course. Details of the separate subjects in which the candidate has passed are recorded on the Certificate.
- (b) Senior and Advanced Course Certificates are awarded to qualified candidates at the end of each year of all Senior and Advanced Courses and are divided into First (60%) and Second (40%) Classes. Distinction is given for a performance of 80%. Candidates may either take the separate examinations in the subjects comprising a Course, spreading the successes over a period of two consecutive years, or enter for the examinations of a complete course in one series of examinations.
- (c) Single-Subject Certificates are awarded to qualified candidates in respect of each subject in the Senior and Advanced Courses. They are awarded at the end of each year and are divided into First and Second Classes. In all stages certificates awarded to candidates who obtain over 80% are endorsed 'with distinction'.

The Northern Counties Technical Examinations Council

(5, Grosvenor Villas, Grosvenor Road, Newcastle upon Tyne, 2) conducts examinations for National Certificates and examinations of a similar standard to those of the City and Guilds of London Institute.

The Council conducts Pre-Senior, Senior and Advanced Course examinations. In the General Courses in Engineering, Shipbuilding, Science, Construction and Mining the Pass standard is between 40% and 50% and Credit at points above 55%. In other courses the Pass standard is between 40% and 55%, Credit between 60% and 75% and Distinction between 80% and 100%.

Technical examinations are also conducted by the Yorkshire Council for Further Education and by the Welsh Joint Education Committee.

The Yorkshire Council for Further Education (Bowling Green Terrace, Jack Lane, Leeds, 11), formed in 1928, conducts examinations to National Certificate level. Certificates are not classified but the grades gained in the individual subjects of the

course are indicated on the certificate in accordance with the following scale:

(a) General Courses

Credit	55% and over
Pass	40% to 54%

(b) Other Courses

Distinction	80% and over
Credit	60% to 79%
Pass	40% to 59%

The Welsh Joint Education Committee (30, Cathedral Road, Cardiff) is a statutory Joint Committee of all the local education authorities in Wales and Monmouthshire and was set up by the Minister of Education in pursuance of the Education Act, 1944. The Joint Committee covers all forms of education and is authorised by the Minister to conduct, on behalf of all the local education authorities in Wales and Monmouthshire, examinations for students in further education establishments.

TECHNICAL EXAMINATIONS IN SCOTLAND

The pattern and function of courses in Scotland is similar to that in England and Wales. Although awards of the Diploma in Technology were not made in Scotland, the remit of the Council for National Academic Awards has been extended north of the border. The Higher National Diploma and Certificate, although administered separately in Scotland, are of the same scope and standard as in England and Wales; the range of the professional courses is also much the same. Most full-time students in further education in Scotland take courses leading to an associateship or diploma of the college they attend.

The qualifications obtainable are:

- (a) Degrees of the C.N.A.A.
- (b) External degrees of London and certain Scottish Universities.
- (c) Professional qualifications.
- (d) College Associateships and Diplomas.
- (e) National Certificates and Diplomas (see England and Wales).
- (f) Certificates of the City and Guilds of London Institute (see England and Wales).

DEGREES OF THE COUNCIL FOR NATIONAL ACADEMIC AWARDS

Four-year full-time courses for the C.N.A.A. degree of B.Sc. in Civil, Mechanical and Electrical Engineering are available at Dundee Technical College and in Textile Technology at the Scottish Woollen Technical College.

EXTERNAL DEGREES OF THE UNIVERSITY OF LONDON AND CERTAIN SCOTTISH UNIVERSITIES

Most full-time degree students in further education take external London degrees at Paisley College of Technology; some students at the Scottish College of Commerce (which is now part of the new University of Strathclyde) used to take the external London B.Sc. (Econ.). Edinburgh degrees are available at the Edinburgh College of Art (and formerly at Heriot-Watt College) and Aberdeen Ordinary degrees at Robert Gordon's Technical College, Aberdeen.

The following courses are available:

<u>College</u>	<u>Final award</u>
Chemistry	
Paisley College of Technology	London B.Sc. Special
Robert Gordon's Technical College	ditto
Physics	
Paisley College of Technology	ditto
Science — General	
Dundee Technical College	London B.Sc. General
Paisley College of Technology	ditto
Pharmacy	
Robert Gordon's Technical College	London B.Pharm.
Civil Engineering	
Robert Gordon's Technical College	Aberdeen B.Sc.(Eng.)
Paisley College of Technology	London B.Sc.(Eng.)
Electrical Engineering	
Robert Gordon's Technical College	Aberdeen B.Sc.(Eng.)
Paisley College of Technology	London B.Sc.(Eng.)
Mechanical Engineering	
Robert Gordon's Technical College	Aberdeen B.Sc.(Eng.)
Paisley College of Technology	London B.Sc.(Eng.)
Metallurgy	
Paisley College of Technology	London B.Sc.
Economics	
Robert Gordon's Technical College	London B.Sc.(Econ.)

COURSES LEADING TO PROFESSIONAL QUALIFICATIONS

Courses are conducted for various professional examinations at some institutions; further details may be found in relevant sections of Part 6.

COLLEGE ASSOCIATESHIPS AND DIPLOMAS

Full-time advanced courses are organised so as to cater for two main types of ability: **Associateship courses** are of honours or pass degree equivalence and give complete or partial exemption from the examinations of professional institutions; the entrance requirements (three S.C.E. Higher Grade passes and two on the Ordinary Grade) are comparable with those for admission to a degree course at a Scottish university. **Diploma courses** are of pass degree equivalence and give partial exemption from the examinations of professional institutions; the entrance requirements are two S.C.E. Higher Grade passes and three on the Ordinary Grade.

Most full-time students taking associateship courses follow four-year courses which lead to an award with honours; the majority of students in this category are at Heriot-Watt College, which has been affiliated to the University of Edinburgh since 1933 and is now to obtain university status. Most diploma courses last three years, compared with four for associateships. They are provided in all the Central Institutions.

ASSOCIATESHIP AND DIPLOMA COURSES IN ENGINEERING, SCIENCE AND ALLIED SUBJECTS

<u>College</u>	<u>Duration</u>	<u>Final award</u>
(a) Engineering		
Chemical Engineering		
Heriot-Watt College	4 years	College Associateship
Civil Engineering		
Dundee Technical College	4 years	ditto
Heriot-Watt College	4 years	ditto
Paisley College of Technology	4 years sandwich	College Diploma
Robert Gordon's Technical College	4 years	College Associateship
	3 years	College Diploma
Electrical Engineering		
Robert Gordon's Technical College	4 years	College Associateship
Dundee Technical College	4 years	ditto
Heriot-Watt College	4 years	ditto
Paisley College of Technology	3 years	College Diploma

<u>College</u>	<u>Duration</u>	<u>Final award</u>
Gas Engineering Heriot-Watt College	4 years	College Associateship in Civil Engineering
Mechanical Engineering Robert Gordon's Technical College	4 years	College Associateship ditto ditto
Dundee Technical College	4 years	
Heriot-Watt College	4 years	
Production Engineering Dundee Technical College	4 years	ditto
Mining Engineering Heriot-Watt College	4 years	ditto
(b) Science		
Biochemistry Heriot-Watt College	4 years	College Associateship (Applied Biochemistry; Technical Biochemistry)
Applied Chemistry Heriot-Watt College	4 years	College Associateship
Applied Mathematics Heriot-Watt College	4 years	ditto
Applied Physics Heriot-Watt College	4 years	ditto
Naval Architecture Robert Gordon's Technical College	3 years	College Diploma
Printing Heriot-Watt College	4 years	College Associateship (Printing Technology)
Textiles Scottish Woollen Technical College	4 years	College Associateships (Textile Design; Textile Technology) College Diplomas (Textile Design; Textile Technology) College Diplomas (Textiles; Jute Manufacture)
	3 years	
	3 years	
Dundee Technical College	3 years	
Building Heriot-Watt College	4 years	College Associateships
Brewing Heriot-Watt College	4 years	ditto

POSTGRADUATE COURSE

Fellowship of Heriot-Watt College. The College offers a course of study at least two years long (full-time) to Associates of the College, graduates and other qualified students who wish to take the Fellowship in any of the branches of study leading to the Associateship of the College.

TECHNICAL EXAMINATIONS IN NORTHERN IRELAND

The technical institutions in Northern Ireland provide a range of studies extending from basic work in English and Mathematics to technological research at postgraduate level. They offer training in skills covering all the main types of employment in Northern Ireland and opportunities for recreational activities.

There are no colleges comparable in scope with the former Colleges of Advanced Technology in England and Wales or with the Scottish Central Institutions; nor is there a system of designated regional and area colleges. The three principal institutions (the Belfast Colleges of Technology, Art and Domestic Science) provide full-time specialised courses. Some work beyond the level of the first year of the H.N.C. course is done at Londonderry Municipal, Coleraine and Larne Technical Colleges. Sandwich courses for university degrees and courses in marine, aeronautical and production engineering are concentrated in Belfast. Most of the senior students at the Belfast College of Technology are under the supervision of Queen's University staff and share facilities with the University students at the Ashby Institute. Local facilities for further education are available in most towns with more than 3,000 inhabitants.

The qualifications available are:

Degrees of the Queen's University, Belfast.

External degrees of London University.

Professional qualifications.

National Certificates and Diplomas.

Certificates of the City and Guilds of London Institute (see England and Wales).

DEGREES OF THE QUEEN'S UNIVERSITY, BELFAST

The Belfast College of Technology is a recognised college of

Queen's University, Belfast, and the following full-time four-year courses are provided for Pass and Honours Degrees:

B.Sc. in Applied Chemistry. Alternative courses are provided in:

Chemical Technology

Polymer and Colour Chemistry

Food Science.

B.Sc. in Applied Chemistry (Pharmaceutics).

B.Sc. in Textile Technology.

B.Sc. in Mechanical or Electrical Engineering. A four-year sandwich course.

Higher degrees. The College offers research facilities for graduates who wish to take the degree of M.Sc. or Ph.D. Research is currently being undertaken in Chemistry, Mathematics, Pharmacy, Physics and Textile Technology.

Courses at Magee University College, Londonderry.

Students at Magee University College may take the first year of the Queen's University courses for the degrees of B.A. and B.Sc.(Econ.).

EXTERNAL DEGREES OF LONDON UNIVERSITY

The following courses leading to external degrees of London University are provided at the Belfast College of Technology:

B.Sc. General Pass and Honours Degrees: three years full-time.

B.Sc. Special Chemistry Degree: classes may be arranged if required.

PROFESSIONAL QUALIFICATIONS

The following courses leading to professional examinations are provided at the Belfast College of Technology:

Institute of Statisticians, Part I: day release.

Institution of Electrical Engineers, Part III: full-time.

Institute of Clerks of Work, Parts I and II: part-time.

Royal Institution of Chartered Surveyors, Quantity Surveying Section, Intermediate and Final Part I: part-time.

Chartered Auctioneers' and Estate Agents' Institute, Intermediate and Final: part-time.

Associateship of the Textile Institute, Parts I and II: part-time.

Graduateship of the Royal Institute of Chemistry: full-time.

Associateship of the Society of Dyers and Colourists: part-time.

Membership of the Pharmaceutical Society of Northern Ireland: full-time.

NATIONAL CERTIFICATES AND DIPLOMAS

The following courses are available:

(i) HIGHER NATIONAL DIPLOMAS

Electrical Engineering, Mechanical Engineering. Belfast College of Technology.

(ii) HIGHER NATIONAL CERTIFICATES

Electrical Engineering. Belfast College of Technology; Larne Technical College

Mechanical Engineering. Larne Technical College

Aeronautical Engineering. Belfast College of Technology.

Civil Engineering. Belfast College of Technology.

Production Engineering. Belfast College of Technology.

Chemistry. Belfast College of Technology; Coleraine Technical College; Larne Technical College; Londonderry Municipal Technical College.

Building. Belfast College of Technology.

Naval Architecture. Belfast College of Technology.

Applied Physics. Belfast College of Technology.

Applied Biology. Belfast College of Technology.

(iii) ORDINARY NATIONAL DIPLOMAS

Building. Belfast College of Technology.

Engineering. Belfast College of Technology; Lisburn Technical College.

(iv) ORDINARY NATIONAL CERTIFICATES

Chemistry. Coleraine Technical College; Larne Technical College; Lisburn Technical College; Londonderry Municipal Technical College.

Mechanical Engineering. Coleraine Technical College; Larne Technical College; Lisburn Technical College; Londonderry Municipal Technical College; Carrickfergus Technical College; Ballymena Technical College; Bangor Technical Institution; Lurgan Technical College; New-

towards Technical Institution; Portadown Technical College.

Electrical Engineering. Coleraine Technical College; Larne Technical College; Lisburn Technical College; Londonderry Municipal Technical College; Carrickfergus Technical College; Ballymena Technical College; Bangor Technical Institution; Lurgan Technical College.

Note. As in England and Wales, two-year courses in Naval Architecture, Construction and Sciences are replacing the three-year O.N.C. courses in Naval Architecture, Building, and Chemistry and Applied Physics.

EXAMINATIONS IN COMMERCE, BUSINESS STUDIES, MANAGEMENT AND OTHER SUBJECTS IN ENGLAND AND WALES

The growth of trade in the nineteenth century and the increasing need for specialised services in accountancy, insurance and banking led to the formation of several professional associations, which constructed syllabuses and offered examinations for admission to membership. Courses for these examinations form an important part of the business studies provision in technical colleges and colleges of commerce.

At a lower level, the introduction at about the same time of commercial shorthand and typing, together with other office machines, led to a demand for teaching in office skills. Such courses soon constituted a large part of the provision for commercial education, in which the lead was taken by private concerns (mainly Pitman's, the Royal Society of Arts and the London Chamber of Commerce); much of the work done in part-time day and evening secretarial classes is still devoted to this type of instruction.

In the 1920s and 1930s efforts were made to establish grouped courses rather than single-subject courses. A scheme for Ordinary and Higher National Certificates in Commerce was introduced in 1935, but its development was adversely affected by the war. Before the war the major colleges began to offer courses for the external degrees of London University such as the former B.Com. or the B.Sc.(Econ.).

In addition to certificate and advanced courses, there has also been a big increase in full-time and part-time secretarial courses

and in modern language courses, including short intensive courses using language laboratories and other new techniques. Nearly all area and local colleges, as well as the twelve colleges of commerce, provide courses, chiefly part-time day and evening for secretaries. The courses are mainly taken by girls between the ages of 15 and 18 and most lead to examinations, on either a single-subject or grouped-subject basis, conducted by the examining bodies at work in this field. For students with G.C.E. 'O' or 'A' level passes some of the larger colleges offer full-time secretarial courses of up to two years' duration, often with an emphasis on one or more foreign languages, in which case part of the course may be spent abroad. There are also shorter and more intensive full-time and part-time courses, for example, for graduates who wish to learn secretarial practice and the office skills before going into business or for shorthand-typists who want to become private secretaries. There are also, of course, classes in shorthand and typing in many of the evening institutes.

Numerous short courses in various aspects of exporting are also provided as part of the colleges' service to commerce. Many of these deal with special export techniques and procedures, suitable for most staff working in export departments. Others, such as those on opportunities for selling different commodities in various markets, and on overseas market information and research, are designed for business managers and executives.

The qualifications available are:

Diploma in Management Studies.

Postgraduate Awards.

C.N.A.A. Degrees.

External degrees of the University of London.

Professional qualifications.

College Diplomas and Associateships.

National Certificates and Diplomas.

Certificate in Retail Management Principles.

Certificate in Office Studies.

Certificates of the City and Guilds of London Institute.

Certificates of the Regional Examining Unions.

Certificates of the Royal Society of Arts and of the London Chamber of Commerce and Pitman's Certificates.

THE DIPLOMA IN MANAGEMENT STUDIES

The Diploma is a national award, first introduced in 1949 and re-constituted in 1961. It is designed for students with graduate or equivalent qualifications and with some experience in industry or

commerce. Courses for the Diploma vary in length from six months full-time to three years part-time.

The Diploma scheme is administered by two Diploma Joint Committees (one for England, Wales and Northern Ireland and the other for Scotland) consisting of representatives of the three Education Departments, the British Institute of Management and certain other professional bodies, as well as the colleges concerned.

The award. The course consists of two parts, Stages I and II. The aim of Stage I is to provide all students with the background of knowledge needed for the final stage. Normally, the students select three subjects from among applied economics, business law, finance and costs, marketing, production, purchasing, statistics and human aspects of management. Stage II for all students covers three subjects: management principles and practice, higher business control, and industrial relations and personnel management.

Admission of students. Candidates are expected to hold a university degree, Diploma in Technology, Associateship of the Scottish Central Institutions, equivalent professional qualifications, or Higher National Certificate or Diploma. Students without these qualifications may be admitted exceptionally if they are aged 27 or over and have at least four years' experience in a post of professional or administrative responsibility.

Courses for the Diploma are offered at the following institutions:

(i) ENGLAND AND WALES

Former Colleges of Advanced Technology: Birmingham; Bradford; Bristol; Cardiff.

Regional Colleges: Brighton; Coventry; Glamorgan; Hatfield; Kingston-upon-Thames; Leicester; Rutherford; North Staffordshire; Nottingham and District; Portsmouth; South-East Essex Technical College; The Polytechnic, Regent Street; Woolwich Polytechnic.

Other Colleges: Manchester College of Science and Technology (University of Manchester); Birmingham College of Commerce; Blackburn Municipal Technical College; Croydon Technical College; Derby and District College of Technology; Ealing Technical College; Hendon College of Technology; High Wycombe College of Further Education; Ipswich Civic College; Kent: Medway College of Technology; Kingston-upon-Hull College of Commerce; Leeds College of Commerce; Liverpool College of Commerce; Luton College of Technology; Middlesbrough: Constantine College of Technology; Mid-Essex Technical

College; Newport and Monmouthshire College of Technology; Oxford College of Technology; Sheffield College of Commerce and Technology; Slough College of Further Education; South-West Essex Technical College; Swansea College of Technology.

(ii) SCOTLAND

Central Institutions: Dundee Technical College; Heriot-Watt College.

(iii) NORTHERN IRELAND

Belfast College of Technology.

POSTGRADUATE COURSES

A number of courses for graduates or persons with equivalent qualifications are offered in further education establishments. They include short specialist courses in Management and Business Studies and secretarial courses for graduates (at the Birmingham, Liverpool and Manchester Colleges of Commerce). High Wycombe College of Technology and Art offers a two-year full-time or a three-year sandwich course leading to its Postgraduate Diploma in Export Marketing. The Cranfield Work Study School offers a one-year postgraduate course in work study.

C.N.A.A. DEGREES

The Crick Report, *A Higher Award in Business Studies* (H.M.S.O., 1964), recommended that an advanced qualification in business studies, equivalent to the Diploma in Technology, should be established to supply the need for an honours degree level sandwich course. It also recommended that the award should be made by the Council for National Academic Awards at the end of a course consisting of academic work in college and practical experience. The minimum entry requirements should be five G.C.E. passes, including two at 'A' level and three others.

The C.N.A.A. has now recognised the five following B.A. degree courses, of the type recommended in the Crick Report:

Business Studies:

City of London College (B.A. Hons.) (4 years); Lanchester College of Technology (B.A. Hons and Ord.) (4 years); Woolwich Polytechnic (B.A. Hons.) (5 years).

Business Administration:

Ealing Technical College (B.A. Hons.) (4 years).

BUSINESS SCHOOLS

In 1964 the Government decided to establish two business schools on the pattern of the Harvard Business School in the United States. One school will be based on Manchester University and the second will be a new creation associated with the London School of Economics and Imperial College of Science and Technology.

EXTERNAL DEGREES OF LONDON UNIVERSITY

Courses for the B.Sc.(Econ.), LL.B. and B.Sc.(Est.Man.) degrees of London University are offered in a number of colleges; candidates for admission to an external degree course must have the minimum academic requirements of the University, details of which can be obtained from the University Entrance Requirements Department, University of London, Senate House, London, W.C.1, or from the Principal of the College concerned.

(i) B.SC.(ECON.)

Courses offered at the former Colleges of Advanced Technology (Bradford and Wales) will now lead to the degrees of the new universities. Courses, three years in length, are now provided at the following colleges:

<u>College</u>	<u>Duration</u>	<u>Final award</u>
Birmingham College of Commerce	3 years full-time	B.Sc.(Econ.)
Bournemouth Municipal College	3 years full-time	ditto
of Technology and Commerce		
Bristol College of Commerce	3 years full-time	ditto
Cambridgeshire College of Arts	3 years full-time	ditto
and Technology		
Lanchester College of Technology	3 years full-time	ditto
Croydon Technical College	3 years full-time	ditto
Hatfield College of Technology	3 years full-time	ditto
Liverpool College of Commerce	3 years full-time	ditto
City of London College	3 years full-time	ditto
The Polytechnic, Regent Street	3 years full-time	ditto
Woolwich Polytechnic	3 years full-time	ditto
Manchester College of Commerce	3 years full-time	ditto
Ealing Technical College	3 years full-time	ditto
Newcastle Municipal College of	3 years full-time	ditto
Commerce		
Nottingham and District	3 years full-time	ditto
Technical College		
Oxford College of Technology	3 years full-time	ditto
Portsmouth College of Technology	3 years full-time	ditto
Kingston College of Technology	3 years full-time	ditto
Wolverhampton and Staffordshire	3 years full-time	ditto
College of Technology		

(ii) LL.B.

Courses, three years full-time for the complete degree, are provided at the following colleges:

<u>College</u>	<u>Duration</u>	<u>Final award</u>
Birmingham College of Commerce	3 years full-time	LL.B.
Lanchester College of Technology	3 years full-time	ditto
Mid-Essex Technical College	3 years full-time	ditto
Liverpool College of Commerce	3 years full-time	ditto
East London College of Commerce	2 years full-time	ditto—Intermediate
Holborn College of Law, Languages and Commerce	3 years full-time	ditto
North-Western Polytechnic	1 year full-time	ditto—Intermediate
Manchester College of Commerce	3 years full-time	ditto—Final
Ealing Technical College	3 years full-time	ditto
Tottenham Technical College	1 year full-time	ditto—Intermediate
Newcastle Municipal College of Commerce	1 year full-time	ditto
Nottingham and District Technical College	3 years full-time	ditto
Kingston College of Technology	3 years full-time	ditto

(iii) B.SC.(EST.MAN.)

Courses, three years full-time, are provided at the following colleges:

<u>College</u>	<u>Duration</u>	<u>Final award</u>
Brixton School of Building	3 years full-time	B.Sc.(Est.Man.)
Liverpool College of Building	3 years full-time	ditto
Nottingham and District Technical College	3 years full-time	ditto

PROFESSIONAL QUALIFICATIONS

In fields such as Accountancy, Surveying, Commerce and Law, there are few qualifications, other than a degree, which give any measure of exemption from the final examinations. But many professional associations do not require their students to take any period of formal instruction; of those that do, some provide the education in their own schools without relying on the public further education system. There is none the less considerable public provision for professional training for Commerce, much of it being provided in specialised Colleges of Commerce. Most professional courses start from the assumption that the student already has a working knowledge of Book-keeping and Commerce and that he is qualified to claim exemption from the preliminary professional examination. Courses are offered at many colleges; details may be found in the relevant sections of Part 6.

COLLEGE DIPLOMAS AND ASSOCIATESHIPS

Some colleges offer their own diploma and certificate courses in commercial and business administration; these courses give limited exemption from the qualifying examinations of some professional bodies. The courses marked with an asterisk (*) in the following list now lead to degrees of the new technological universities.

Awards of the former Colleges of Advanced Technology

<u>College</u>	<u>Duration</u>	<u>Final award</u>
Bristol College of Science and Technology	4 years sandwich	Diploma in Economics and Administration*
Loughborough College of Technology	4 years sandwich	College Diploma in Industrial Chemistry and Management*
	4 years sandwich	College Diploma in Industrial Engineering and Management*
	4 years sandwich	College Diploma in Ergonomics and Cybernetics*
Welsh College of Advanced Technology	3 years sandwich	College Diploma in Business Administration

Awards of other colleges

<u>College</u>	<u>Duration</u>	<u>Final award</u>
Birmingham College of Commerce	4 years sandwich	College Diploma in Commerce
	3 years full-time	College Diploma in Advanced Business Studies
	1 year full-time	College Diploma in Business Administration
Brighton College of Technology	3 years full-time	Diploma in Computing and Data Processing
City of London College	4 years sandwich	College Diploma
Leeds College of Commerce	1 year full-time	Diploma in Administration Studies
	1 year full-time	Certificate in Business Training
City of London College for the Distributive Trades	4 years full-time	College Diploma
	2 years full-time	Advertising Joint Board Certificate
	1 year full-time	College Certificate and Parts A and B of British Display Society
	1 year full-time	College Certificate in Retail Distribution
	1 year sandwich	Joint Committee Certificate in Retail Management

<u>College</u>	<u>Duration</u>	<u>Final award</u>
The Polytechnic	2 years full-time	College Certificate in Commercial Administration
	4 years sandwich	College Diploma in Commercial Administration with Engineering
Woolwich Polytechnic	5 years sandwich	College Diploma and H.N.D. Business Studies
Ealing Technical College	4 years sandwich	College Diploma in Business Administration
Hendon Technical College	1 year sandwich	ditto
Nottingham and District Technical College	4 years sandwich	College Diploma
Portsmouth College of Technology	4 years sandwich	College Diploma in Commerce and Administration

NATIONAL CERTIFICATES AND DIPLOMAS IN BUSINESS STUDIES

The National Certificates and Diplomas in Business Studies replace the Certificates in Commerce established before the war. The reorganised scheme of awards was set up by a Joint Committee consisting of nominees of the Department of Education and Science, various educational associations and professional bodies. The Joint Committee approves individual college schemes for courses leading to its various awards, secures comparable standards and awards the Certificates to successful candidates; colleges set their own examinations which are moderated and assessed by the Joint Committee to safeguard the national standard.

The term 'Business Studies' connotes the study of administrative services of all types of commercial organisations as well as the study of the exchange of goods and services.

The Joint Committee regards the following subjects as admissible and colleges may include other subjects in which adequate instruction is available:

Economics (compulsory in all years) and four other subjects in each year chosen from among Accounting, Business Finance, Commercial Law, Costing, Distribution, Economics of Transport, Human Relations, Industrial Law, Marketing, Market Research, Mercantile Law, Modern Languages, Office Organisation, Principles of English Law, Production Methods, Purchasing, Secretarial and Administrative Practice, Statistics, Structure of Business.

(i) HIGHER NATIONAL DIPLOMA IN BUSINESS STUDIES

The H.N.D., introduced in 1962, is a new award. The courses last either two years on a full-time basis or three years on a sandwich basis. The entry requirements are the same as those for the H.N.C. Courses are designed to provide a combination of general and specialised study in business and reach a standard above that of the H.N.C., because they permit a wider range of studies. The final standard approaches that of a university pass degree.

Candidates normally study five subjects a year but may take two more under certain conditions; each candidate must undertake a project and submit an extended essay on it. An oral examination is arranged before the essay is submitted.

(ii) HIGHER NATIONAL CERTIFICATE IN BUSINESS STUDIES

The Higher National Certificate was introduced in 1961 to replace the former H.N.C. in Commerce. The Certificate is designed for older students who wish to pursue their studies beyond the stage of the O.N.C., whether or not they intend to seek a specialist professional qualification. Admission requirements are two G.C.E. 'A' level passes or the equivalent or O.N.C. or O.N.D. There may be considerable variation in the content of different courses, but each course must provide training in the analytical treatment of business problems. Some branch of Economics or Applied Economics is compulsory in each of the two years of the part-time course.

The aim of the course is not to train specialists in particular techniques but to continue to broaden the outlook of students and to make them aware of industrial and commercial problems and possible methods of solution. Normally three subjects form a full programme of study, although additional subjects may be offered for endorsements if conditions permit.

The Joint Committee regards the following subjects as admissible and colleges may include others, such as Work Study or Organisation and Methods, in which adequate instruction is available:

Applied Economics (compulsory in both years) and two other subjects in each year chosen from among Advanced Accounting, Application of Statistics, Business Organisation, Commercial or Industrial Law, Costing, Economics of Transport, Human Relations, Marketing, Modern Languages, Production Methods, Purchasing, Secretarial Practice.

(iii) ORDINARY NATIONAL DIPLOMA IN BUSINESS STUDIES

The Ordinary National Diploma was introduced in 1961 and is a

new award, intended to provide a full-time alternative to the O.N.C. The two-year O.N.D. course is particularly attractive for girls because the time available for study enables them to become proficient in shorthand and typing at the same time as they follow the Diploma syllabus. The O.N.D. is accepted by the professional bodies *pari passu* with the O.N.C. for exemption purposes.

The admission requirements are the same as those for the O.N.C. Students must take at least five subjects including Economics and English, and not more than seven, in the Final Examination. The course is made up as follows:

First Year: Structure of Commerce; Accounting I; English I; Economic History; Economic Geography; General Law; and two subjects from among Mathematics, Elements of Statistics and a Modern Language (if General Law is taken in the first year).

Second Year: Economics; Accounting II; English II; Economic History (if not taken in first year); Economic Geography (if not taken in first year); General Law (if not taken in first year); and two subjects from among Elements of Statistics (if not taken in first year), Mercantile Law (if General Law is taken in the first year), British Constitution or Central and Local Government, and a Modern Language (a Modern Language, if selected, should be taken throughout the course).

(iv) ORDINARY NATIONAL CERTIFICATE IN BUSINESS STUDIES

The Ordinary National Certificate in Business Studies was introduced in 1961 to replace the O.N.C. in Commerce. The admission requirements are G.C.E. 'O' level passes in English and three other subjects from among Mathematics, Geography, History, a language other than English, Science and Commerce or the equivalent; students must have reached the age of 16. The course is a two-year part-time day or evening course. The subjects included in the course are:

First Year: Structure of Commerce; and three subjects from among Accounting I, Economic History, Economic Geography, Principles of English Law, Elements of Statistics, and a Modern Language I.

Second Year: Economics; English; and two subjects from among Accounting II, Interpretation of Accounts, Principles of English Law (if not taken in first year), Elements of Statistics (if not taken in first year), and a Modern Language II.

When taken with credits, the O.N.C. is accepted on a subject-for-subject basis for exemption from the intermediate examinations of most of the leading business professional associations. The holder of the O.N.C. is eligible for admission to a course for the H.N.C. or H.N.D., while an average mark of 60% or more will qualify him to enter a sandwich course for the C.N.A.A. B.A. degree in business studies proposed in the Crick Report, *A Higher Award in Business Studies*.

CERTIFICATE IN RETAIL MANAGEMENT PRINCIPLES

The Certificate is awarded by the Department of Education and Science on the recommendation of a Joint Committee representing the Department, the Retail Trades Education Council and the City and Guilds of London Institute and is endorsed by each of these bodies.

The course may be arranged on a part-time basis and extend over two years or on an intensive basis. Students must be 21 or over on entry to the course (or 22 in the case of intensive courses) and should normally have had not less than two years' experience in retail distribution (graduates one year) and produce evidence of further education in the trade, such as the National Retail Distribution Certificate, the Diploma of the National Association of Retail Furnishers, the Advanced Examination of the Grocers' Institute, or have received full-time education up to the age of 18.

Candidates must pass both parts A and B of the course. Part A consists of Administration, Human Relations and Communication, Accounting, Training and Education. Part B consists of Economics, Law, Merchandising, and Work Study.

THE CERTIFICATE IN OFFICE STUDIES

Two-year part-time courses for the Certificate, which is a new award, were introduced in September 1963; the Certificate is intended for young office workers who have stayed at school until 16—those who left at 15 can qualify by doing a preliminary course of part-time study. There are no formal academic entry requirements.

The Certificate is intended to be a worthwhile qualification in its own right and the courses are designed with this end in view, but for some students it will be a step to continued further education, as the Joint Committee for National Awards in Business Studies will accept it as meeting their requirements for entry to the O.N.C. course in Business Studies, provided that a credit has been obtained in the three compulsory subjects. All courses leading to the award

must be held at colleges of further education recognised by the Department of Education and Science.

The course consists of the following subjects:

English and General Studies*; Clerical Duties* and either Business Calculations* or Book-keeping*; Typewriting and Office Machinery; Social Studies; The Law and the Individual. Other subjects may be offered as additional options by the Regional Examining Unions. The subjects marked with an asterisk (*) are compulsory.

The Certificate is awarded by a National Committee on which the Department of Education and Science is represented.

CERTIFICATES AWARDED BY THE CITY AND GUILDS OF LONDON INSTITUTE

The Institute offers examinations for the following awards:

Retail Trades Junior Certificate (Second-Year Examination)
(Course 134).

National Retail Distribution Certificate (Course 123).

(i) RETAIL TRADES JUNIOR CERTIFICATE

The Final examinations for the Retail Trades Junior Certificate are conducted by the City and Guilds of London Institute and certain of the Regional Examining Unions. The subjects of the course are:

First Year: English I; Calculations for Retailing I; Elements of Retailing; Sources and Distribution of Commodities.

Second Year: English II; Calculations for Retailing II; Organisation of Retailing; Ordering and Supervising of Stock.

The Certificate is awarded on the results of a second-year examination conducted by five examining bodies covering the whole of the United Kingdom in agreement with representatives of the retail trades (the Retail Trades Education Council). The Regional Examining Unions concerned are the U.L.C.I., the E.M.E.U., the N.C.T.E.C. and the U.E.I.

The Certificate course is additional to that for the National Retail Distribution Certificate; students who obtain the Certificate and reach first-year standard in a N.R.D.C. commodity subject are exempted from the first year of the N.R.D.C. course.

(ii) NATIONAL RETAIL DISTRIBUTION CERTIFICATE

This Certificate course is intended for candidates employed in the relevant distributive trades. The course is normally two years part-

time in length and the minimum requirements for entry are full-time education up to the age of 16 or the possession of the Retail Trades Junior Certificate. The final examinations are conducted by the City and Guilds of London Institute. The subjects of the course are:

First Year: A commodity subject; Calculations and accounts for retailers; Selling and organisation of retail distribution; English.

Second Year: A commodity subject; Calculations and accounts for retailers; Selling and organisation of retail distribution; Display or Elements of English Law or Elements of Scots Law.

CERTIFICATES AWARDED BY THE REGIONAL EXAMINING UNIONS

In addition to courses leading to national examinations (e.g. for the O.N.C. in Business Studies or the National Retail Distribution Certificate) the Regional Examining Unions offer courses leading to their own awards.

UNION OF LANCASHIRE AND CHESHIRE INSTITUTES

The Union offers courses leading to the following national awards: H.N.C. in Business Studies; O.N.C. in Business Studies; Certificate in Office Studies; Retail Trades Junior Certificate.

The Union also offers the following courses: Preliminary Clerical and Office Studies Course; Course in Full-time Secretarial Duties; Course in Office Skills; Shorthand-Typist's Proficiency Certificate Course; Audio-Typist's Certificate Course; Secretarial Diploma Course; Non-Course Commercial Subjects; Foreign Language Courses; English for Foreign Students' Course.

Preliminary Clerical and Office Studies Course. Candidates must pass in English (Preliminary) and Business Calculations and they may also take not more than two additional subjects chosen from among Clerical Duties (Preliminary), Elements of Accounts and Commerce, Geography (Preliminary) and Public Affairs.

Course in Full-time Secretarial Studies. A one-year full-time course in Shorthand-Typist's Proficiency, Commerce, Calculations and Accounts.

Course in Office Skills. A part-time course for a group certificate in English (Preliminary) or English I or English II or English III or Office Practice and any grade of Typewriting or Shorthand.

Shorthand-Typist's Proficiency Certificate. Candidates must pass in English, Shorthand and Typewriting.

Audio-Typist's Certificate. One examination lasting 60 minutes.

Secretarial Diploma. Candidates must pass in Private Secretarial Work and Office Organisation, and in Shorthand with Advanced Typewriting.

Non-Course Commercial Subjects. Candidates may take examinations in: Commercial Arithmetic; Book-keeping; Commerce; Geography; Economic History I; Elements of Accounts and Commerce; Calculations and Accounts.

Foreign Language Courses. Part-time students may take examinations in: French; German; Spanish; Italian; Russian, Danish; Dutch; and Swedish.

English for Foreign Students. This is a course for part-time foreign students in three grades, each varying according to the student's knowledge of English.

(ii) EAST MIDLAND EDUCATIONAL UNION

The Union offers courses leading to the following national awards: O.N.C. in Business Studies; National Retail Distribution Certificate; Certificate in Office Studies; Retail Trades Junior Certificate.

The Union also offers the following courses: Pre-Senior Grouped Courses; Senior Grouped Courses.

Pre-Senior Grouped Courses. The examinations are intended mainly for students of about 15 or 16 who intend to go on to appropriate Senior Courses. To gain a certificate candidates must pass in the required subjects at one examination; the object of the examination is to ascertain whether the candidate is ready to go on to a higher course. The courses are as follows:

Commercial Course in English, Business Calculations, Book-keeping and/or Commercial Geography.

Clerical Course in English, Typewriting and/or Shorthand; Commerce may be included as an additional optional subject.

Commercial Course for students who intend to go on to a Senior Course for the O.N.C. in Business Studies; candidates must pass in English and two other subjects from among Business Calculations, Geography, Commerce and a Foreign Language.

Senior Grouped Course Certificates. Certificates are awarded to candidates who pass the appropriate subjects at one series of examinations.

General Commercial Course in Commerce and two subjects from among Book-keeping, English, Arithmetic or Commercial Mathematics, Commercial Geography, French, or German, or Spanish.

Shorthand-Typist's Course in English, Shorthand and Typewriting.

Clerk-Typist's Course in Typewriting, Arithmetic or Commerce, and Book-keeping and English.

(iii) UNION OF EDUCATIONAL INSTITUTIONS

The Union offers a course leading to the following national award: O.N.C. in Business Studies.

The Union also offers the following courses: Introductory Shorthand-Typist's Course; Shorthand-Typist's Course; Clerk-Typist's Course; Foreign Languages.

Introductory Shorthand-Typist's Course. Intended for candidates who need more than one year's work to reach the Grade I standard. The course consists of English and one or two subjects from among the following: Calculations and Accounts, Shorthand, and Typewriting.

Shorthand-Typist's Course consists of English, Shorthand, Typewriting, Office Organisation and Management, Office Routine and Machinery, and Private Secretary Duties.

Clerk-Typist's Course. This leads to a grouped course certificate in English, Commercial Arithmetic and Typewriting.

Foreign Language courses are offered in French, German and Spanish.

(iv) THE NORTHERN COUNTIES TECHNICAL EXAMINATIONS COUNCIL

The Council offers courses leading to the following national awards: H.N.C. in Business Studies; O.N.C. in Business Studies; Certificate in Office Studies; Retail Trades Junior Certificate.

The Council also offers the following courses: Clerical; Senior General Commercial; Audio-Typist's Certificate Course; Foreign Languages.

CERTIFICATES AWARDED BY THE ROYAL SOCIETY OF ARTS, THE LONDON CHAMBER OF COMMERCE AND PITMAN'S

These examining bodies are the major providers of qualifications at the secretarial level and many colleges offer evening and part-time day courses leading to their examinations.

- (i) THE ROYAL SOCIETY OF ARTS: 18, Adam Street, Adelphi, London, W.C.2.

The new scheme of examinations replaces that for the Senior School Commercial Certificate (instituted in 1927). It is suitable for students, mainly girls, of about 17 taking full-time secretarial and commercial courses. The Royal Society says that the standard required for a pass (50% in each subject) can be roughly equated with a good G.C.E. 'O' level pass. Candidates for the examinations may enter for one or more subjects offered in the scheme; successful candidates are awarded a certificate showing the subject/s, either First Class or Second Class, in which they have passed. But the special Secretarial and Commercial Certificates are awarded to those who pass at one examination in the appropriate group of subjects.

The Royal Society of Arts Secretarial Certificate, Stage II (Intermediate) is awarded to candidates who pass at one examination in English Language; Office Practice and Shorthand-Typist's Certificate; and at least one other subject from among the list given below, but excluding Shorthand or Typewriting. Candidates may take Shorthand and/or Typewriting as additional subjects for endorsement on the certificate.

Accounts; Arithmetic; Commerce; Economic History; English Language; English Literature; French; General Principles of English Law; Geography; German; History of the British Commonwealth; Italian; Mathematics; Modern British History; Office Practice; Shorthand (80/100 w.p.m.); Shorthand-Typist's Certificate; Spanish; Statistics; Typewriting.

The Royal Society of Arts Commercial Certificate, Stage II (Intermediate) is awarded to candidates who pass at one examination in English Language, and at least two subjects selected from among Accounts, Arithmetic, Commerce and Office Practice; and at least two subjects selected from among Economic History; English Literature; French; Geography; German; Spanish; History of the British Commonwealth; Italian; General Principles of English Law; Mathematics; Modern British History; Statistics; Typewriting.

Candidates may also take Shorthand and/or the Shorthand-Typist's Certificate as additional subjects for endorsement on the certificate.

The certificates awarded state the subjects in which the candidate has been given a First Class Pass (70%) or a Second Class Pass (50%), or a Pass or Pass with Distinction in the case of Typewriting

and the Shorthand-Typist's Certificate. The Certificate in Shorthand states the speed in which the candidate has passed.

Ordinary (Single-Subject) Certificates

Classification of Certificates:

<u>Stage I (Elementary):</u>	Pass with Credit: 70%
	Pass: 50%
<u>Stage II (Intermediate):</u>	1st Class 70%
	2nd Class 50%
<u>Stage III (Advanced):</u>	1st Class 75%
	2nd Class 50%

In Typewriting Stages II and III certificates indicate a Pass or a Pass with Distinction (not 2nd Class or 1st Class). Certificates in Shorthand at the speeds of 50, 60, 80, 100, 120, 140, 150 and 160 words per minute are awarded. Pass certificates are awarded in the examinations for the Audio-Typist's and Shorthand-Typist's Certificates but candidates with high marks in all sections are awarded a Pass with Distinction.

The Society may award Silver Medals at the Advanced Stage and Bronze Medals at the Intermediate Stage.

Group Certificates in Commercial Subjects

Stage I (Elementary): Candidates must pass in the following subjects in any Stage of the Society's examinations within three consecutive years:

Arithmetic or Mathematics; English (with literature) or English Language, and two of the other subjects in which an examination in the Elementary Stage is held, one of which must be either Book-keeping or Commerce or Office Practice.

All the subjects in which the candidate has passed are endorsed on the certificate.

Stage II (Intermediate): Candidates must pass in at least three of the following subjects in the Intermediate Stage at any four consecutive series of examinations offered by the Society; candidates must choose one subject from group A, one subject from group B and one other subject from either group B or group C:

A. Commerce or Economics.

B. Commerce or Economics if not taken under A; Arithmetic; Book-keeping; Costing; Economic Geography; Economic and Social History; General Principles of English Law; Commercial Law; Company Law; Outlines of Central and Local Government; Statistics.

- C. English (with literature) or English Language or a Foreign Language.

Stage III (Advanced): Candidates must pass in at least three of the following subjects in the Advanced Stage at any four consecutive series of examinations offered by the Society. Candidates must choose one subject from group A, one subject from group B and one other subject from either group B or group C:

- A. Either (i) Commerce (Finance) or Commerce (International Trade) or Commerce (Marketing) or (ii) Economics.
- B. Either (i) or (ii) of A if not already taken; Accounting or Book-keeping; Arithmetic; Costing; Economic Geography; Economic and Social History; Commercial Law; Company Law; Cargo Insurance; Income Tax Law and Practice; Public Administration; Shipping Law and Practice; Statistics.
- C. English (with literature) or English Language or a Foreign Language.

Special Group Certificates

Clerk-Typist's Certificate: Candidates must pass in the following subjects at the same series of examinations:

Typewriting; and English (with literature) or English Language; and Book-keeping or Arithmetic or Mathematics or Commerce or Office Practice.

The prescribed subjects may be taken at any Stage but the minimum requirement for the award of the Clerk-Typist's Certificate is a Pass with Credit in Stage I.

Audio-Typist's Certificate: This examination is conducted at Stage II (Intermediate).

Group Certificate in Clerical Studies: Candidates must pass in the following subjects in Groups I and II:

Group I: Stage I: English Language and Commerce or Office Practice, with *either* Arithmetic or Mathematics, plus Book-keeping, *or* Shorthand, 50/60 w.p.m., plus Typewriting.

Group II: Stage II: English Language with A. Arithmetic, Book-keeping, and Commerce or Office Practice; *or* B. Secretarial Duties, Shorthand, 80/100 w.p.m., and Typewriting; *or* C. Secretarial Duties and the Shorthand-Typist's Certificate.

Group Certificate in Secretarial Subjects: Candidates must pass in the following subjects at any four consecutive series of examinations offered by the Society:

- A. Shorthand-Typist's Certificate, Stages II or III, plus Secretarial Duties, Stage II; *or*
- B. Typewriting, Stages II or III, plus English Language or English (with literature), Stages II or III, plus Secretarial Duties, Stage II; *or*
- C. Shorthand, 80 w.p.m. or more, plus English Language or English (with literature), Stages II or III, plus Secretarial Duties, Stage II.

Group Certificate for Cost Clerks: Candidates must pass, within two consecutive years, in Stage II Arithmetic, English Language, Book-keeping and Costing.

Group Certificate in Foreign Languages: Candidates must pass in three foreign languages over any period of years. All the certificates must be in Stage III and at least one must be First Class.

Group Certificate in Law Subjects: Candidates must pass in three of the following subjects over any period of years:

- A. General Principles of English Law, Stage II.
- B. One subject from among Common Law, Law of Trusts, Real Property and Conveyancing, Stage III.
- C. One of the subjects under B not already taken or Company Law, Law of Evidence and Civil Procedure, Shipping Law and Practice, Stage III.

Passes in additional law subjects may be endorsed on the certificate.

Group Certificate for Shipping Clerks: Candidates must pass in the following subjects in Stage III within three consecutive years:

- A. Shipping Law and Practice.
- B. Commerce (Finance) or Commerce (International Trade) or Commerce (Marketing).
- C. Economic Geography.

Candidates may also take a foreign language at Stage II if they wish.

(ii) THE LONDON CHAMBER OF COMMERCE: 69, Cannon Street, London, E.C.4.

Certificates, Group Certificates and Group Diplomas

Examinations are conducted at three levels, Elementary, Intermediate and Higher. Candidates of any age may enter for any of the examinations, except for the Higher Stage, for which candidates will not be accepted under 16, unless they have passed the Intermediate Stage (or its equivalent) in the same subject. A certificate for each subject is awarded to candidates who pass in any of the

subjects of the examination for which they present themselves. Intermediate Group Certificates and Higher Group Diplomas are awarded to candidates who pass in certain groups of subjects. Candidates who already have a Pass Certificate are eligible to sit again in an endeavour to obtain a distinction or a prize.

Intermediate Stage: Single Subjects; Book-keeping Group Certificate; Shorthand-Typist's Certificate.

Single-subject examinations are offered in the following:

Arithmetic; Book-keeping; Business Statistics; Costing; Economics; Elements of Commerce; English; English for Commerce for Overseas Students; Foreign Languages; Geography; Handwriting; History; Mathematics; Shorthand, including French Shorthand; Shorthand-Typist's Certificate; Typewriting.

Group Certificates: Book-keeping must be gained in one series of examinations and may be awarded with Distinction. Candidates must pass in Book-keeping, Arithmetic and English or Elements of Commerce.

Shorthand-Typist's Certificate must be gained in one series of examinations and candidates must pass in English and Shorthand/Typewriting Duties.

Higher Stage: Single Subjects; Group Diplomas.

Single-subject examinations are offered in the following:

Accounting; Advertising; Arithmetic; Banking and Currency; Business Statistics; Commerce and Finance; Costing; Economics; English; English for Commerce for Overseas Students; Foreign Languages (French, German and Spanish); Geography; History; Marine Insurance; Law—Bankruptcy and Winding-up; Law—Commercial; Law—Company; Law—The Constitution, including Principles of English Law; Law—Contracts and Torts, Law—Land Law and Conveyancing; Law—Procedure and Law of Evidence; Law—Wills and Trusts; Mathematics; Salesmanship and Sales Management; Secretarial Practice; Shipping; Shorthand, including French Shorthand; Typewriting.

Group Diplomas, which must be gained in one series of examinations, may be awarded with Distinction in the following subjects:

Accounting: Candidates must also pass in Commerce and Finance, Commercial Law or Economics, or Business Statistics.

Costing: Candidates must also pass in Accounting, Commerce and Finance and Commercial Law.

Economics: Candidates must also pass in History, Commerce and Finance or Banking and Currency.

Languages: Candidates must also pass in a second foreign language and in English.

Law: Candidates must pass in any three Law subjects.

Secretarial Practice: Candidates must also pass in Commercial Law and Company Law.

Shipping: Candidates must also pass in Commerce and Finance and in Geography or Marine Insurance.

Private Secretary's Diploma. Candidates for the Diploma must be not less than 20 and must pass in English, Private Secretarial Practice and Office Procedure, a General Paper, a paper on Meetings, Shorthand/Typewriting Duties and satisfy an interviewing board. Outstanding candidates may be awarded the Diploma with Distinction. Candidates who fail to obtain the Diploma but pass in English and Shorthand/Typewriting Duties may be awarded the Shorthand/Typist's Diploma.

There is an association of holders of the Diploma, The Qualified Private Secretaries' Association Ltd., whose members use the designatory letters 'P.S.Dip.'. The Honorary Secretary is Mrs. A. E. Ferris, 8, Leaver Gardens, Greenford, Middlesex.

(iii) **PITMANS:** 154, Southampton Row, London, W.C.1.

Pitmans offer full-time and part-time courses leading to their own and other certificates at their own colleges. Courses for Pitmans certificates may also be taken at some colleges of further education.

Office Training and Commercial Courses: examinations are offered in the following subjects at Elementary, Intermediate and Advanced stages:

Advanced Accounts; Book-keeping; Handwriting and Spelling; Business Letters; Secretarial Duties; General Principles of Law; Precis; Commerce; Private Secretarial Work; Economics; English; Office Practice; French; Shorthand Theory; Mathematics; Spanish; Shorthand-Typing (Shorthand-Typist's Certificate); Geography; German; Typewriting.

French Shorthand: students with a colloquial knowledge of French and able to write Pitman's Shorthand in English are taught the accepted adaptation of Pitman to French. The course lasts for twelve weeks (2 evenings a week).

Medical Stenography: a twelve-week course (1 evening a week) for students with a good knowledge of Shorthand Theory and an initial speed of 80 w.p.m.

Pitmans College Diploma: is awarded to full- and part-time students who are at least 16 and have passed in five or more different subjects from the list given above.

The Higher Secretarial Diploma: is awarded to students who pass, in one examination, in the following subjects:

Shorthand-Typewriting; Typewriting; English; Secretarial Duties; Business Methods and Correspondence; and one optional subject selected from among Elementary Book-keeping, Elements of Economics, General Principles of Law, French, German, Spanish or Italian.

EXAMINATIONS IN COMMERCE, BUSINESS STUDIES, MANAGEMENT AND OTHER SUBJECTS IN SCOTLAND

The pattern of commercial courses in Scotland is roughly the counterpart of that for technical courses. There is a variety of full- and part-time courses, ranging from those in the basic skills of shorthand and typing to advanced secretarial and commercial courses. The principal examining body in this field is the Scottish Council for Commercial Education (22, Great King Street, Edinburgh), whose Senior Commercial Certificate secures exemption from the intermediate examinations of a number of professional bodies and whose Advanced Commercial Certificate is broadly comparable with the H.N.C. in Business Studies. Courses leading to final professional examinations are offered in certain colleges.

The two main courses in general management are those leading to the Diploma in Management Studies and to the Certificate in Business Administration, which are offered in certain of the Central Institutions. The latter course is designed for the junior or trainee manager, with a lower age limit on entry of 21. It is available on a day-release or evening basis; while it constitutes an award in its own right it can also serve as an introduction to the Diploma in Management Studies.

In addition to these regular courses, part-time or short full-time courses in various areas of management such as work study, operational research, data processing and export marketing are available according to demand.

The qualifications obtainable are shown in the following list; notes on courses other than those provided in England and Wales are given after the list.

Diploma in Management Studies.

External degrees of London University.

Professional qualifications.

College Diplomas and Associateships.

Certificate in Business Administration.

Senior Commercial Certificate and Advanced Commercial Certificate.

Certificate in Retail Management Principles.

National Retail Distribution Certificate.

Retail Distributive Trades Junior Certificate.

Scottish Council for Commercial Education Certificates.

Other courses.

Royal Society of Arts Certificates and Pitman's Certificates.

Language Courses.

(i) SCOTTISH COUNCIL FOR COMMERCIAL EDUCATION CERTIFICATES

Scottish Certificate in Office Studies; Shorthand/Typist's Certificate; Clerk/Typist's Certificate; Secretarial Certificate; Advanced Secretarial Certificate; Senior Commercial Certificate; Advanced Commercial Certificate; Export Principles and Practice; Export Practice.

The Scottish Council's schemes of examinations are administered by a Professional Studies Committee and a Clerical and Secretarial Studies Committee. The former is in charge of the Senior and Advanced Commercial Certificates and consists of representatives of the 14 professional associations which recognise the Council's awards and Council members. The Clerical and Secretarial Studies Committee assumed responsibility for the Clerk/Typist, Shorthand/Typist and Secretarial Certificates and has introduced the Advanced Secretarial Certificate.

The Council has made a study of the educational needs of those engaged in export marketing and of how best to meet the demands of industry and commerce for courses in modern languages.

Scottish Certificate in Office Studies: a two-year part-time course leading into the Senior Commercial Certificate Course if the student has endorsements or two S.C.E. Ordinary Grade passes.

Shorthand/Typist's and Clerk/Typist's Certificates: two-year part-time or one-year full-time courses leading to Secretarial Certificate courses.

Secretarial Certificate: a two-year part-time course designed

for students holding more responsible secretarial posts. The admission requirements are a pass in English at S.C.E. Ordinary Grade or possession of a pass in English I in the Shorthand/Typist's or Clerk/Typist's Certificates. The course may lead into the course for the Advanced Secretarial Certificate.

Advanced Secretarial Certificate: this two-year part-time course was introduced to cater for the needs of employees whose duties require high standards of proficiency in shorthand and typewriting and who expect to take administrative posts in secretarial work. The admission requirements are a pass in English at S.C.E. Higher Grade or possession of the Secretarial Certificate.

Senior Commercial Certificate: a two-year part-time course, for which the entry requirements are four S.C.E. Ordinary Grade passes, including English. The Certificate was originally introduced by the National Committee for Commercial Certificates and students were required to pass in an external examination in six subjects, of which English, commerce and economics were compulsory; the other three subjects could be chosen from among a wide range, including office practice and foreign languages. In 1950 shorthand and typewriting were removed from the list and the Secretarial Certificate was introduced incorporating them. The Scottish Council for Commercial Education has reviewed the scheme in order to meet more nearly the requirements of the professional bodies; new subjects have been introduced and the standard of subjects retained has been revised. The new arrangements make it easier for the student to postpone his choice of career in commerce until he has gained in maturity and experience.

The following professional associations grant exemption, on a subject-for-subject basis, from their own intermediate examinations to students who hold the Senior Commercial Certificate:

Association of Certified and Corporate Accountants; Chartered Insurance Institute; Chartered Institute of Secretaries; Corporation of Secretaries; Institute of Bankers in Scotland; Institute of Cost and Works Accountants; Institute of Hospital Administrators; Institute of Transport; Purchasing Officers' Association; Institute of Export; Building Societies Institute; Advertising Joint Intermediate Examinations Board; Savings Bank Institute.

Advanced Commercial Certificate: a two-year part-time course, for which the entry requirements are the Senior Commercial Certificate or the equivalent. The Certificate is designed as a qualification at final professional level and was introduced by the National Committee in 1958 to meet the needs of young executives and others whose duties call for a broad understanding of commer-

cial principles and practices rather than competence in a specialised professional field.

Certificate in Business Administration

The Certificate is awarded by the Scottish Education Department in conjunction with the British Institute of Administration; courses are organised on a day-release or evening basis at Dundee Technical College. The Certificate is an award in its own right but can also serve as an introduction to the Diploma in Management Studies.

(ii) COLLEGE DIPLOMAS AND ASSOCIATESHIPS

The main provision is offered by the Scottish College of Commerce, Glasgow. The two most important courses at the Diploma level, each lasting three years, are those leading to the Teacher's Diploma in Commerce and the Diploma in Secretarial Science. The latter course is designed to meet the demands of industry for well-qualified secretaries, with or without a working knowledge of one or more foreign languages. The **Associateship of the Scottish College of Commerce**, which is of the standard of an honours degree, is offered in a variety of subjects:

Diploma and Associateship: Business Administration.

Associateship: Commerce, Marketing and Overseas Trade.

Associateship: Economics, Money and Banking; Economics and Government Administration; Industrial Economics.

Diplomas and Advanced Diplomas of the Glasgow School of Management

Associateship: Financial Administration and Commercial Accountancy.

Associateship: Modern Languages.

The following courses are also available:

<u>College</u>	<u>Final award</u>
Personnel Management	
Dundee Technical College	College Diploma
Commercial Studies	
Dundee Technical College	Ditto
Heriot-Watt College	Ditto
Business Administration	
Dundee Technical College	College Certificate

(iii) PROFESSIONAL QUALIFICATIONS

Courses leading to the examinations of a number of professional associations are offered at certain colleges; further details may be found in the relevant sections of Part 6.

(iv) EXTERNAL DEGREES OF LONDON UNIVERSITY

A course leading to the B.Sc.(Econ.) degree of London University is offered at Robert Gordon's Technical College, Aberdeen.

EXAMINATIONS IN COMMERCE, BUSINESS STUDIES, MANAGEMENT AND OTHER SUBJECTS IN NORTHERN IRELAND

The following qualifications are available:

Diploma in Management Studies*.

Professional qualifications*.

Higher National Certificate in Business Studies*.

Ordinary National Diploma in Business Studies*.

Ordinary National Certificate in Business Studies*.

Certificate in Office Studies.

Retail Trades Junior Certificate.

Certificates of the Royal Society of Arts.

*Note: At the Belfast College of Technology.

The following courses of preparation for professional examinations are available at the Belfast College of Technology:

Advertising Association and the Institute of Practitioners in

Advertising, Intermediate: part-time.

Institute of Bankers, Banking Diploma: part-time.

Associateship of the Chartered Insurance Institute: part-time.

Building Societies' Institute, Intermediate: part-time.

Chartered Institute of Secretaries, Intermediate and Final: part-time.

Corporation of Secretaries, Intermediate and Final: part-time.

Graduateship of the Institute of Transport: part-time.

Institute of Cost and Works Accountants: part-time.

Institute of Chartered Accountants in Northern Ireland: part-time.

- Association of Certified and Corporate Accountants, Intermediate and Final: part-time.
- Purchasing Officers' Association, Purchasing Diploma: part-time.
- Graduateship of the Institute of Personnel Management: part-time.
- Institute of Marketing and Sales Management, Diploma in Marketing: part-time.
- Institution of Works Managers' Certificate: part-time.
- Institute of Office Management, Certificates in Organisation and Methods and in Office Supervision: part-time.
- British Institute of Management, Certificate in Foremanship and Supervision: part-time.



The Measure of a Job

WHAT'S THE YARDSTICK FOR JUDGING ONE CAREER AGAINST ANOTHER? You have to look at the nature of the work—is it people or things? is it ideas or action—for there's no point at all in going after work with which you are fundamentally out of sympathy. Then there's the salary—and that, obviously, is very important too.

And there's a question that cuts across both the others: how much responsibility will the job give you? A lot rests on the answer, for if you've got character and ability you'll want to take your own decisions just as soon as you can.

In Barclays we consider we have some satisfactory answers to all these questions. The last one first: we are a very big bank, and the parent company of a very big Group, but the control of both is more effectively decentralised than in any other comparable business. Which means of course that Head Office doesn't make all the decisions—and that in its turn means more responsibility all the way down the chain of command. Our branch managers in particular have wide discretionary powers.

Salary? The managers of our biggest branches have salaries of £5,000 and over, and there are other salaries in the Bank very considerably higher than that—paid, of course, for more responsibility. As a graduate you would receive a three year advantage on the salary scale. That means that if you joined us at 22 you would get £765 a year, while after a year's service you would be eligible for merit additions to the scale, so that by 23 you could be getting £980. As time goes by your salary is more and more what you make it: at 28, you could be earning £1,410, and to this, as to the other figures mentioned here, would be added the allowance paid to staff working in large towns—£150 a year in Central London. But it will have meant a lot of hard work, learning the business.

And the job itself? Obviously, money, for, as you may have seen in other advertisements, money is our business. Perhaps not so obviously, until you think about it—people. Banking touches life at almost every point. As a banker you'll be dealing with businessmen (tough and not so tough), private citizens (most, but not all, of credit and renown); lawyers and builders and motor manufacturers, housewives, commercial artists, Uncle Tom Cobleigh and all. You'll be their guide, philosopher and friend in financial and many other matters. It'll take you time to pick it up, but you'll do it—if you like people.

If you don't like people, don't think of working in a bank. If you don't want responsibility we don't really want you. But if you do like people, and you do want responsibility come and talk to us about it; we can tell you so much more—about pensions and training arrangements and amenities and so forth—in an interview than in an advertisement.

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Part 4

University Degrees and
Diplomas



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UNITED KINGDOM ATOMIC ENERGY AUTHORITY,
Risley, Warrington, Lancashire.**

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University Degrees and Diplomas

ADMISSION TO UNIVERSITY COURSES

Broadly speaking, universities have a general requirement for admission to a degree course; special requirements may be in force for admission to particular courses. Requirements are usually expressed in terms of subjects passed at G.C.E. 'A' level and the Higher Grade of the S.C.E. The universities have established a clearing-house to handle applications for university courses, the Universities Central Council on Admissions (Tavistock Square, London, W.C.1). All intending students who live in the United Kingdom may obtain information on application procedures from them. The council publishes annually a booklet *How to Apply for Admission to a University*, price 2s. The scheme now covers all universities, other than Belfast, and all medical schools. The Committee of Vice-Chancellors and Principals (Gordon Square, London, W.C.1) publishes annually a *Compendium of University Requirements*, price 11s. 6d., which gives details of entry qualifications for university courses.

THE AWARDS

The awards made by the universities may be broadly separated into the following categories: First Degrees; Higher Degrees; Honorary Degrees; First Diplomas and Certificates; Higher Diplomas and Certificates.

FIRST DEGREES

B.A.; B.Sc.
The Scottish M.A.

(i) NOMENCLATURE

Various names are given to the first degrees at British universities. At most universities the first degree in Arts is the B.A. (Bachelor of Arts) degree and the first degree in science is the B.Sc. (Bachelor of Science) degree. But at the universities of Oxford and Cambridge the B.A. is the first degree gained by students in both Arts and Science; the B.Sc. is unknown at Cambridge, but is a higher degree at Oxford. In Scotland the first arts degree at the four old universities is that of M.A. There are numerous variations on the Bachelor theme, e.g. B.Sc.(Econ.) (Bachelor of Science in Economics), B.Com. (Bachelor of Commerce), B.Soc.Sc. (Bachelor of Social Sciences), B.Eng. (Bachelor of Engineering). The first degree in medicine is the conjoint degree of M.B., Ch.B. (Bachelor of Medicine, Bachelor of Surgery), the designatory letters of which vary from university to university.

(ii) STRUCTURE OF COURSES

First degree courses vary considerably in structure, not only between one university and another but also between faculties in one university. The degree examination is usually in two sections, Parts I and II, Part I coming after one or two years of the course and Part II ('finals') at the end of the course. The Scottish first degree system differs substantially from that in English and Welsh universities (*see (vi) below*).

(iii) HONOURS OR SPECIAL DEGREES AND PASS OR ORDINARY OR GENERAL DEGREES

Each university decides the form and content of its own degree examinations. These vary from university to university, and so, too, do the names given to the various sorts of degree awarded. This can lead to confusion, because one name may mean something quite different at two different universities. For example, a 'Special' degree at many universities is a Special Honours qualification awarded on satisfactory completion of a Special Honours course, involving specialised study in a single subject. At Cambridge, a 'Special' is an Ordinary degree, of much lower level, for non-Honours candidates, taken in several subjects.

The first degree structure in all British universities is based on the **honours degree**. Most graduates who go on to higher academic qualifications, and those entering, for example, the higher grades in the Civil Service or research would normally have an

honours degree of good class. Successful candidates in honours degree examinations are placed in different classes, according to their performance, first class being the highest. The other classes given vary from university to university, but the classification most often used is: Class I; Class II (Division 1); Class II (Division 2); Class III.

The different categories of honours degree are as follows:

Special Honours degrees are one-subject courses (although subsidiary relevant subjects are normally studied as well).

Joint Honours, Combined Honours or Double Honours courses cover two main subjects to the same level. The number of such courses available has increased in recent years.

General Honours degrees are normally taken in at least two main subjects, and often three.

At many universities, a performance in an honours course that does not warrant the award of honours will earn a **Pass** degree. This would be awarded on an honours course for a performance which did not warrant the award of third class honours.

Apart from the honours course, there are courses that lead to **Ordinary** (sometimes called **Pass** or **General**) degrees. The candidate is examined in (normally) three subjects. The results are usually not classed, but at some universities ordinary degrees are awarded with distinction or with honours.

Broadly speaking, it is possible to enter a course for a pass or ordinary degree, or a more difficult course for honours. This is not a uniform distinction and it should be noted that:

- (1) Some courses are regarded from the start as honours or special courses or as pass or ordinary or general courses and the students following them are regarded at all times as honours or pass students.
- (2) In other courses, even where students are registered for honours, they begin with studies common to both honours and pass courses and are regarded as only potential honours students until they can be set on distinctively honours or pass courses after examinations at the end of the first or second year of the course.

Students may sometimes be able to transfer from an honours course to a pass course or vice versa; some pass courses are provided only to cater for students who, during the course, do not reach the standard of honours and are relegated to an easier course. Most students start and finish in honours courses; the number of direct entry pass degree courses has decreased and no new ones have been established in recent years.

(iv) NUMBER OF SUBJECTS STUDIED

Excluding medicine and dentistry, the broad subject areas are Arts (or Humanities), Social Science, Pure Science and Applied Science. Most students in England and Wales study one main subject selected from one of these areas. In Scotland one-subject honours courses predominate only in technology. It is possible to distinguish eighteen types of degree course according to the number of subjects studied; these types are a variation on three main categories:

- (1) Honours courses in one to three subjects with or without examinable subsidiary subjects.
- (2) Pass or ordinary courses in one to three subjects with or without examinable subsidiary subjects.
- (3) Common studies for pass and honours in one to three subjects with or without examinable subsidiary subjects.

Students following one-subject courses do not usually study only that one subject: courses in one main subject usually include related fields and most one- and two-subject courses include the formal study of one or more subsidiary or ancillary subjects, which may be and normally are examined in the Part I examination.



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There have recently been changes in the combinations of subjects studied, notably at the new universities. In joint, combined or double honours courses two main subjects are studied, with or without subsidiaries, to the same level; the main subjects are usually chosen from the same broad subject area. In England and Wales, with the exception of the University of Keele, courses whose main subjects bridge the arts and sciences are few. But in Scotland the function of the Ordinary M.A. course is to provide a wide general education and to include both arts and science.

(v) LENGTH OF DEGREE COURSES

First degree courses may be preceded by a preliminary year, from which students with the appropriate entry qualifications may be exempted. The preliminary year, now usually found in science and applied science subjects, is tending to disappear. At the University of Keele the preliminary Foundation Year is compulsory for all students and is an integral part of all first degree courses, which last four years. At most universities honours and pass courses in arts, social science, pure and applied science last three or four years, but courses in architecture, dentistry and veterinary medicine usually last five years and complete qualifying courses in medicine up to six years. Courses in fine arts and pharmacy may last four years; four-year courses exist mainly in double honours schools, especially when they involve foreign languages and a period of study abroad, and in the technological universities, where some courses include a period of integrated industrial training.

(vi) THE SCOTTISH FIRST DEGREE

The distinctive feature of the Scottish first degree system is the Ordinary M.A. course, which has no counterpart in England and Wales, and the Ordinary B.Sc. course, both of which last three years. The function of the Ordinary M.A. is to provide a broad, general education. Scottish undergraduates are required to show during their first two years of study, over a range of subjects, that they are fit to go on to an honours degree course, which takes four years to complete. Because of the different Scottish school tradition and a lower entry age the level of work in the first year of Scottish first degree courses is, generally, less advanced in those subjects which are taught in school than in first year courses in England and Wales. The wider spread of subjects and the rather less specialised character of many of the courses mean that the level of the Scottish four-year honours courses reaches a standard about the same as that of the English and Welsh three-year honours degree course.

HIGHER DEGREES

Masters' degrees (M.A., M.Sc., etc.) (including B.Phil. and B.Litt.).

Doctor of Philosophy (Ph.D. or D.Phil.).

Senior doctorates (D.Litt., D.Sc., etc.).

At Oxford and Cambridge the degree of M.A. is conferred on any B.A. of the University without any further course of study or examination after a specified number of years and on payment of a fee.

Candidates for a master's degree at other universities (and at some for the degrees of B.Phil., B.Litt. and B.D., which are of equivalent standing) are normally required to have a first degree, although it need not have been obtained in the same university. Masters' degrees are taken after one or two years' full-time study. The Ph.D. requires at least two or, more usually, three years' full-time study. In some universities and faculties students may be selected for a Ph.D. course after an initial year's study or research common to both a Ph.D. and a Master's degree. Candidates for a Master's degree are required either to prepare a thesis for presentation to examiners, who may afterwards question them on it orally, or to take written examination papers; they may be required to do both. All Ph.D. students present a thesis, none being required to take an examination paper as well.

A major development in science and applied science in recent years has been the introduction of a M.Sc. degree, awarded at the end of a one-year course in a special topic on the results of a written examination and also, in some cases, a thesis.

Senior doctorates are designated on a faculty basis (e.g. D.Litt. (Doctor of Letters) and D.Sc. (Doctor of Science)). Candidates are usually required to have at least a master's degree. Senior doctorates are conferred on more mature and established workers on the basis of published contributions to knowledge.

AEGROTAT DEGREES

Candidates who have followed a course for a degree but have been prevented from taking the examinations by illness may be awarded a degree certificate indicating that they were likely to have obtained the degree had they taken the examinations.

HONORARY DEGREES

Most universities confer honorary degrees on persons of distinction in academic and public life and on others who have rendered

service to the university or to the local community. Normally the degrees so awarded are not less than masters' degrees.

FIRST DIPLOMAS AND CERTIFICATES

Courses for first diplomas and certificates are relatively simple in structure; they usually reach a level lower than that required for the award of a degree. There is usually a carefully defined course in a specialised or vocational subject, lasting one or two years, followed by all candidates. Most courses are full-time.

HIGHER DIPLOMAS AND CERTIFICATES

Higher diplomas (e.g. in public health, public administration, medicine and technology) are awarded either on a full-time or, less often, on a part-time basis according to the subject and the university. Candidates must usually be graduates or hold equivalent qualifications. Diplomas are awarded after formal courses of instruction and success in written examinations. A certificate or diploma in education is awarded to graduates training to become teachers after one year's full-time study and teaching practice.

UNIVERSITY OF ABERDEEN

Marischal College, Aberdeen

(Abbreviation: Aberd.)

FIRST DEGREES

(i) FIRST DEGREES IN ARTS

M.A. Ordinary: 3 years. For their final examinations candidates must choose at least one subject from each of four of the following groups of subjects:

- (1) Logic and Metaphysics; Moral Philosophy.
- (2) English Literature.
- (3) Arabic; Celtic; French; German; Greek; Hebrew; Italian; Latin; Russian; Spanish; Swedish; Syriac.
- (4) Botany; Chemistry; Geology; Mathematics; Natural Philosophy; Zoology.
- (5) British History; Economic History; Geography; International Relations; Mediaeval European History; Modern European History; Political Economics; Political Theory; Psychology; Scottish History.

M.A. Honours: 4 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 and 2), 3rd Class.

Candidates must pass in a subject from an Honours group (Language and Literature; Mental Philosophy; Science; History and Law; Music) and in two subjects chosen outside the group. Courses are available in the following subjects:

Biblical Study; Celtic Studies; Celtic-English; Classics; Economic Science; Economics and International Relations; Economics-Politics; English; English-Biblical Study; English-Psychology; English-Russian; English-Swedish; French Studies; French-English; French-German; French-Italian; French-Russian; French-Spanish; Geography; German Language and Literature; German-English; German-Russian; German-Spanish; German-Swedish; Greek-English; History; Economic and General History; History-English; History-International Relations; History-Politics; Italian Studies; Jurisprudence-International Relations; Jurisprudence-Philosophy; Jurisprudence-Politics; Latin-Biblical Study; Latin-Celtic; Latin-English; Latin-French; Latin-Italian; Latin-Spanish; Mathematics; Mathematics and Physics; Mental Philosophy; Music; Physics; Philosophy-English; Philosophy-International Relations; Philosophy-Politics; Psychology; Psychology-Economic History and Theory; Psychology-Philosophy; Political Studies; Russian Studies; Sociology; Spanish Studies; Spanish-English; Spanish-Italian; Swedish Studies.

Students are not guaranteed admission to Honours course at the beginning of their course; selection for Honours depends on students' level of performance during their first and second years and the approval of their Head of Department.

LL.B. Ordinary and Honours: Ordinary 3 years; Honours 4 years. Classification of Honours: 1st Class, 2nd Class and 3rd Class.

Licence in Theology (L.Th.): 3 years.

(ii) FIRST DEGREES IN SCIENCE

B.Sc. Ordinary: 3 years. Candidates must attend not less than seven approved courses of instruction in not less than four and not more than six subjects; all candidates must take at least one course in Physics or Chemistry. The subjects of study form two groups, A and B; candidates may not take Group B subjects before their second year.

Group A: Botany; Chemistry; Geography; Geology; Logic; Mathematics; Physics; Psychology; Zoology.

Group B: Anatomy; Biochemistry; History and Philosophy of Science; Physiology; Soil Science.

B.Sc. Honours: 4 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 and 2), 3rd Class and Ordinary.

Students are not guaranteed admission to Honours course at the beginning of their course; selection for Honours depends on students' level of performance during their first and second years and on the approval of their Head of Department. Students who are exempted from the first year of study may be regarded as Honours students on entry. Candidates must attend not less than eight approved courses of instruction in not less than four and not more than six subjects. The subjects of study are the same as those for the Ordinary degree.

B.Sc.(Agr.) Ordinary and Honours: Ordinary 4 years; Honours 5 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 and 2), 3rd Class.

Honours courses are available in:

Agriculture (Animal Husbandry); Botany; Economics; Zoology.

B.Sc.(For.) [Forestry] Ordinary and Honours: Ordinary 3 years; Honours 4 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 and 2), 3rd Class.

B.Sc.(Eng.) Ordinary and Honours: Ordinary 3 years; Honours 4 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 and 2), 3rd Class.

Courses are available in:

Civil Engineering; Electrical Engineering; Mechanical Engineering.

(iii) FIRST DEGREES IN MEDICINE

M.B., Ch.B.: length of total qualifying course: 6 years. Candidates may be awarded 'Honours' or 'Commendation' on the aggregate results of their professional examinations.

M.A. and M.B., Ch.B.: students begin on the M.A. course and start the M.B., Ch.B. course in their third year.

B.Sc. and M.B., Ch.B.: candidates for the combined degree must pass the first M.B., Ch.B. examination in Biology, Chemistry and Physics and the second in Anatomy and Physiology and Biochem-

istry; they spend an extra year studying two science subjects. Candidates for B.Sc. Honours must spend a further year in the special study of a science subject.

(iv) COMBINED DEGREES

M.A. and B.Sc.: 5 years.

M.A. and LL.B.: 5 years.

HIGHER DEGREES

(i) ED.B.; B.D.; M.SC.

Ed.B.: 2 years postgraduate. Classification of Honours: 1st Class, 2nd Class, 3rd Class.

The degree is awarded on the results of two examinations and a thesis; candidates who pass the first examination are entitled to receive the Diploma in Education.

B.D.: 3 years postgraduate. The degree may be awarded with Distinction.

M.Sc. The degree may be awarded on the results of research or at the end of special one-year courses in:

Agricultural Economics; Agricultural Botany; Animal Production; Biochemistry; Analytical Chemistry; Polymer Chemistry; Silicate Chemistry; Crystallography; Ecology; Geochemistry; Economic Geology; Mineralogy; Clay Mineralogy; Stratigraphy; Structural Geology; Mathematics; Physics; Applied Electronics; Soil Science.

(ii) PH.D.; D.LITT.; D.SC.; LL.D.; M.D.; CH.M.

DIPLOMAS AWARDED

Diploma in Education: 1 year postgraduate (1st year of course for Ed.B.).

Diploma in Religious Education: awarded to students who have taken the Ordinary Class of Biblical Study in their degree, have successfully completed the prescribed course of training in methods of Religious Education at the College of Education and have reached a satisfactory standard in the practice of teaching.

Higher Diploma in Religious Education: awarded to students who have included the Ordinary and Advanced Classes in Biblical Study in their degree and have met the same requirements as those for the Diploma.

Diploma in Statistics: awarded to graduates who have obtained 1st or 2nd Class Honours in their degree; 6 terms full-time or 3 terms for candidates with adequate experience or part-time.

Diploma in Public Health: candidates must be medical graduates or hold equivalent medical qualifications; one year full-time or 18 months part-time or 15 months full- and part-time.

BATTERSEA COLLEGE OF TECHNOLOGY

(proposed University of Surrey)
London, S.W.11

The College expects to be incorporated by Royal Charter as the University of Surrey during 1965-66. The new University will be progressively established in Guildford, Surrey.

FIRST DEGREES

(i) FIRST HONOURS DEGREE IN SCIENCE AND TECHNOLOGY

B.Sc. Honours: courses, which last 3 years or 4 years in the case of sandwich courses, are available in the subjects listed below. Students may be transferred to an Ordinary degree course at an appropriate point in their studies.

Biochemistry; Chemical Engineering; Chemistry; Civil Engineering; Dietetics; Electrical Engineering; Human Biology; Materials Technology; Mechanical Engineering; Metallurgy; Metallurgy and/or Materials Technology with a foreign language and Regional Studies; Microbiology; Modern Mathematics; Physical Sciences; Physics; Technological Mathematics.

(ii) FIRST HONOURS DEGREE IN HUMANITIES, SOCIAL SCIENCES, LINGUISTIC AND REGIONAL STUDIES

B.Sc. Honours: courses, which last 3 years (4, including a period abroad, in the case of Linguistic and Regional Studies), are available in:

Human and Physical Sciences; Human Relations; Linguistic and Regional Studies (German, Russian, Russian Language and Soviet Studies).

Classification of Degrees (an asterisk (*) indicates that the degree

PROPOSED UNIVERSITY OF SURREY

(Battersea College of Technology)

Principal & Vice-Chancellor Elect: D. M. A. LEGGETT, M.A., D.Sc., F.R.Ae.S., F.I.M.A.

FIRST DEGREE COURSES

in ENGINEERING: Chemical, Civil, Electrical, Mechanical
METALLURGY and MATERIALS TECHNOLOGY
with a foreign language option

CHEMISTRY MATHEMATICS: Modern, Technological PHYSICS
*BIOCHEMISTRY PHYSICAL SCIENCES
MICROBIOLOGY HUMAN & PHYSICAL SCIENCES
*HUMAN BIOLOGY HUMAN RELATIONS
DIETETICS HOTEL & CATERING ADMINISTRATION
LINGUISTIC & REGIONAL STUDIES MUSIC

POSTGRADUATE COURSES

in ENGINEERING: Applied Dynamics, *Biomechanics; Bridge, Highway,
Structural; Chemical; Control/Computer Systems
*MATHEMATICS PHYSICS: Microwave, Rheological
SPECTROSCOPY CRYSTALLOGRAPHY RADIATION
RUSSIAN for graduate engineers and scientists

**Starting October 1966*

Following the decision of the Government that the College should be granted university status, a petition has been presented to Her Majesty the Queen in Council for a royal charter incorporating the University which it is hoped may be entitled the University of Surrey. As a result, since October 1964 the College has been running its own first degree courses, other than in Music, and as from October 1965 students accepted for postgraduate courses or research will be candidates for a higher award of the new University.

Research facilities in all Departments of Engineering and Science

Halls of Residence Full facilities for Athletics

*Further information obtainable from the Academic Registrar at the College,
London, S.W.11*

may be awarded with an endorsement on the successful completion of the year spent in industry):

Biochemistry: 1st Class, 2nd Class (Divs I and II) or 3rd Class; Ordinary—Pass or Pass with Credit. Chemical Engineering: 1st Class, 2nd Class (Divs I and II) or Pass*. Chemistry: 1st Class, 2nd Class (Divs I and II), 3rd Class or Ordinary*. Civil Engineering: 1st Class, 2nd Class (Divs I and II) or Ordinary*. Dietetics: 1st Class, 2nd Class (Divs I and II) or 3rd Class; Ordinary—Pass or Pass with Credit. Electrical Engineering: 1st Class, 2nd Class (Divs I and II) or Pass*. Human Biology: 1st Class, 2nd Class (Divs I and II) or 3rd Class; Ordinary—Pass or Pass with Credit. Materials Technology: 1st Class; 2nd Class (Divs I and II), 3rd Class or Ordinary Degree in Metallurgy and Materials Technology*. Mechanical Engineering: 1st Class, 2nd Class (Divs I and II) or Pass*. Metallurgy: 1st Class, 2nd Class (Divs I and II), 3rd Class or Ordinary Degree in Metallurgy and Materials Technology*. Metallurgy and/or Materials Technology with a foreign language and regional studies: 1st Class, 2nd Class (Divs I and II), 3rd Class or Ordinary Degree in Metallurgy and Materials Technology with a foreign language and regional studies. Microbiology: 1st Class, 2nd Class (Divs I and II), 3rd Class or Ordinary (in Divs). Modern Mathematics: 1st Class, 2nd Class (Divs I and II), 3rd Class or Ordinary. Physical Sciences: 1st Class, 2nd Class (Divs I and II) or 3rd Class*. Physics: 1st Class, 2nd Class (Divs I and II), 3rd Class or Pass*. Technological Mathematics: 1st Class, 2nd Class (Divs I and II), 3rd Class or Ordinary*. Human and Physical Sciences: 1st Class, 2nd Class (Divs I and II) or Pass. Human Relations: 1st Class, 2nd Class (Divs I and II) or Pass. Linguistic and Regional Studies: 1st Class, 2nd Class (Divs I and II) or 3rd Class.

(iii) ORDINARY DEGREE

B.Sc. Ordinary in Hotel and Catering Administration:

4 years (integrated academic and practical training): The degree is classified into divisions.

(iv) EXTERNAL DEGREE

B.Mus. Ordinary (Durham) and B.Mus. Honours (London):

the College provides three-year part-time courses for these external degrees.

HIGHER DEGREES

M.Sc.: 1-year courses, some of which may be taken part-time, leading to examinations for the M.Sc. degree, are available in the following subjects:

Applied Dynamics and Mechanical Vibrations; Bridge Engineering; Crystallography; Highway Engineering; Microwave Physics; Modern Techniques in Chemistry; Principles and Practice of Radiation Protection; Theory and Practice of Rheology; Spectroscopy; Structural Engineering; Systems Engineering.

M.Phil.: the degree is awarded after 2 years' full- or part-time research; full-time courses are at present available only in Civil and Mechanical Engineering.

Ph.D.: the degree is awarded after 3 years' full- or part-time research; full-time courses are at present available only in Civil and Mechanical Engineering.

DIPLOMAS AND CERTIFICATES AWARDED

Postgraduate diplomas are awarded after 1-year full- or part-time courses in the following subjects:

Chemical Engineering; Crystallography; Microwave Physics; Principles and Practice of Radiation Protection; Theory and Practice of Rheology; Russian; Systems Engineering.

Postgraduate certificates are awarded after a 1-year part-time course in Hotel and Catering Management and Radiological Protection.

PROFESSIONAL QUALIFICATIONS

(i) NURSING

The College runs courses for the London University Sister Tutors' Diploma and for the Health Visitor's Certificate of the Royal Society for the Promotion of Health. It also offers a four-year course of integrated nursing education, covering the syllabuses of the General Nursing Council (General Register), the Training Council for Health Visitors (Health Visitor's Certificate) and the Queen's Institute of District Nursing.

Diploma in the Practice of Nursing: some candidates for the degree of B.Sc. in Human Biology may be admitted to a four-year course, including an extra postgraduate year of study in a London teaching hospital. The course leads to the award of the degree and a Diploma in the Practice of Nursing.

(ii) METALLURGY

Associateship Diploma: a one-year full-time course, success in which is accepted by the Institution of Metallurgists for exemption from their Associateship Examination. The course may not be continued after 1965-66.

THE QUEEN'S UNIVERSITY, BELFAST

(Abbreviation: Q.U. Belf.)

FIRST DEGREES

(i) FIRST DEGREES IN ARTS

B.A. General (Pass): 3 years. Students take either three subjects or two subjects and one pair of cognate subjects.

B.A. Honours: 4 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 and 2), 3rd Class.

Courses are available in:

Ancient History with Greek and Latin; Ancient and Mediaeval History; Celtic Languages and Literature; Classics; Economic and Social History; English Language and Literature; English and Philosophy; English and French; French Language and Literature; French and Philosophy; Geography; German Language and Literature; German and Philosophy; German and Music; Latin; Latin and Scholastic Philosophy; Greek; Mathematics; Mediaeval and Modern Languages; Mediaeval Studies; Modern History; Music; Philosophy; Philosophy and Psychology; Politics and Modern History; Politics and Philosophy; Psychology; Scholastic Philosophy; Spanish Language and Literature.

B.Mus. Honours: normally 4 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 and 2), 3rd Class.

B.Sc.(Econ.) Pass: 3 years full-time or 4 or 5 years part-time.

B.Sc.(Econ.) Honours: 4 years full-time or 5 years part-time plus one year full-time. Classification of Honours: 1st Class, 2nd Class (Divs 1 and 2), 3rd Class.

LL.B. Pass or Honours: the degree is normally taken after three years' study by undergraduates or after two years by graduates. The final examinations are for an honours degree but a student

who does not obtain Honours may be awarded a pass degree. Classification of Honours: 1st Class, 2nd Class (Divs 1 and 2), 3rd Class and Pass.

(ii) FIRST DEGREES IN SCIENCE AND TECHNOLOGY

B.Sc. Pass: 3 years.

B.Sc. Honours: 4 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 and 2), 3rd Class.

Most students seeking honours first take a pass degree and a year later take an honours certificate. Courses are available in:

Anatomy; Applied Mathematics; Archaeology; Biochemistry; Botany; Chemistry; Geography; Geology; Mathematics; Microbiology; Physics; Physiology; Psychology; Statistics.

B.Agr. General or Honours: the degree may be taken either as a degree in general agriculture or as a degree with honours in one or more of the agricultural sciences. The general course normally lasts four years. Candidates for honours must first take the B.Sc. degree and complete another one or two years' study. Classification of Honours: 1st Class, 2nd Class (Divs 1 and 2), 3rd Class.

B.Sc. Pass in Applied Science: normally 4 years.

B.Sc. Honours in Applied Science: normally 4 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 and 2) and Pass. Courses are available in:

Civil Engineering; Mechanical Engineering; Electrical Engineering; Aeronautical Engineering. (There are separate Pass and Honours courses in Civil and Aeronautical Engineering, but not in Electrical and Mechanical Engineering.)

Note. Full-time courses for the B.Sc. degree in Applied Chemistry, Applied Chemistry (Pharmaceutics) and Textile Technology and a sandwich course for the B.Sc. degree in Mechanical or Electrical Engineering are provided at the Belfast College of Technology. They are four-year courses. Honours are awarded on the results of the fourth year examinations and special Honours papers may be set. The classification of Honours is: 1st Class, 2nd Class (Divs 1 and 2) and Pass.

(iii) FIRST DEGREES IN MEDICINE

M.B., B.Ch. and B.A.O. (Bachelor of Obstetrics): normally 6

years. Honours, in two divisions, may be awarded on the results of the final medical examination.

B.D.S.: normally 5 years. Honours, in two divisions, may be awarded on the results of the final dental examination.

HIGHER DEGREES

(i) MASTERS' DEGREES AND THE EQUIVALENT

LL.B. and **B.Agr.:** *see (i) above.*

B.Ed.: 2 years full-time or 3 years part-time plus 1 year full-time.

M.A.: may be taken by Belfast graduates 1 year after graduation, by thesis, examination or research, and by other graduates 2 years after enrolment, by thesis after research.

M.Sc.: similar requirements to those for M.A. A course of instruction, leading to an examination, is offered in Light Electrical Engineering.

M.Sc.(Econ.): similar requirements to those for M.A. and M.Sc.

LL.M.: similar requirements to those for other Masters' degrees.

M.Agr.: similar requirements to those for other Masters' degrees.

B.D.: 2 years' postgraduate study.

(ii) DOCTORATES

Ph.D.: may be awarded to graduates of any university; study or research resulting in a thesis after not less than two years; may also be awarded to certain non-graduates who have a qualification equivalent to a degree.

D.Lit.: by thesis or published work.

D.Mus.: by composition.

D.Sc.(Econ.): open to Belfast graduates 5 years after graduating in any faculty.

LL.D.: by thesis or published work.

D.Sc.: by thesis or published work.

D.D.: open to Belfast divinity graduates of at least 6 years' standing.

(iii) HIGHER DEGREES IN MEDICINE

M.D., M.Ch., M.A.O. and M.D.S.: open to Belfast medical graduates of 3 years' standing by examination or thesis.

HONORARY DEGREES

Any Doctor's or Master's degree may be awarded as an honorary degree.

DIPLOMAS AWARDED

Diploma in Education: 1 year full-time or 3 years part-time.

Diploma in Public Administration (D.P.A.): 2 or 3 years part-time.

Diploma in Social Studies (Dip.Soc. Studies): 1 or 2 years full-time.

Diploma in Public Health (D.P.H.): 1 year full-time or 18 months part-time.

Diploma in International Studies: 2 years part-time.

Diploma in Numerical Mathematics (Dip.Num.Maths.): 1 year full-time.

Diploma in Theology: 2 years part-time.

UNIVERSITY OF BIRMINGHAM

Birmingham, 15
(Abbreviation: Birm.)

FIRST DEGREES

Classification of first degrees: Degrees, other than those in medicine, are classified: 1st Class, 2nd Class (Divs 1 and 2), 3rd Class Honours and Pass. The degrees of M.B., Ch.B. and B.D.S. may be awarded 'with Honours'.

(i) FIRST DEGREES IN ARTS

(All courses last three years unless otherwise stated.)

B.A. Special Honours: courses are available in any one of the following special schools:

Ancient History and Archaeology; Classics; English; French; Geography; German; Greek; Italian; Latin; Mathematics; Mediaeval and Modern History; Philosophy; Russian; Spanish; Theology.

B.A. Honours: a course is available in Italian Renaissance Studies.

B.A. Combined Honours: the following combinations are possible in Ancient and Modern Literature:

Greek and English; Greek and French; Greek and Italian;
Greek and Spanish; Latin and English; Latin and French;
Latin and Italian; Latin and Spanish.

Certain other combinations are possible among the following subjects:

American Studies; Archaeology; Drama; English; French;
Geography; German; Greek (Ancient); Greek (Modern);
History; Italian; Latin; Logic; Mathematics; Music;
Philosophy; Political Science; Physical Education; Psychology;
Russian; Social Study; Sociology; Spanish; Theology.

B.Com. Honours: at the end of their first year students are required to specialise in *either* Languages (French, German, Italian, Spanish, Russian, Modern Greek) with studies in Commerce *or* Business Management with quantitative studies.

A course is also offered in Russian Studies.

B.Soc.Sc. Honours: courses are available in the following subjects:

Economics, Politics and Sociology (at the end of their first year students must choose two or more subjects among Econometrics and Social Statistics; Economic History; Economics; Political Science; Sociology; Russian Studies; Social Study; West African Studies).

Geography; History and Social Science; Mathematics, Economics and Statistics; Russian Studies; Social Study; Moral and Political Philosophy.

LL.B. Honours and B.Mus. Honours: the course lasts three or four years according to entry qualifications.

(ii) FIRST DEGREES IN SCIENCE AND TECHNOLOGY

B.Sc. Honours: all courses last three years. Courses are available in any one of the following Honours Schools:

Anatomical Studies; Bacteriology; Biochemistry; Biological Sciences; Chemical Engineering; Chemistry; Civil Engineering; Electrical Engineering; Electronic Engineering; Engineering Production; Geography; Geology; Mathematical Physics; Mathematics; Mathematics and Statistics; Mechanical Engineering; Mechanical Engineering and Economics; Medical Biochemical Studies; Metallurgy; Microbiology; Minerals Engineering; Physics; Physiological Studies.

B.Sc., B.Com. Ordinary or Double Honours: 4 years. A new course, introduced in 1965, leading to a Double Honours or a conjoint Ordinary degree in Mechanical Engineering, Economics and a foreign language and including a period of study abroad. The course is designed to qualify students as both engineers and economists.

(iii) FIRST DEGREES IN MEDICINE

B.D.S.: 5½ years. The degree may be awarded with Honours.

M.B., Ch.B.: 6 years: total qualifying. The degree may be awarded with Honours. Students may obtain the B.Sc. as well as their medical degrees by devoting seven years instead of six to study in the University.

HIGHER DEGREES

(i) ONE- OR TWO-YEAR COURSES

M.A.: by thesis resulting from research or by a prescribed course of study and examination.

M.Ed.: 1 year full-time or 3 years part-time prescribed course, examination and thesis.

M.Com., M.Soc.Sc.: by prescribed course of study and examination.

M.Mus.: 1 or 2 years after B.Mus.

M.Sc.: 1 year after B.Sc. Honours or 2 years after B.Sc. in science. The degree may be taken in subjects of the first degree course by research and thesis or by a prescribed course of study and examination in graduate courses, leading either to the degree of M.Sc. or to the Diploma in Graduate Studies, in the following subjects:

Pure Mathematics; Mathematical Statistics; Mathematical Physics; Radioactivity; Radiobiology; Reactor Physics and Technology; Physics of Solids; Comparative Neuro-Sensory Physiology and Behaviour; Applied Genetics; Applied Geophysics; Mineral Chemistry; Meteorology and Climatology; Immunology; Physiology; Brewing Science; Clinical Biochemistry; Thermodynamics and Related Studies; Engineering Production and Management; Quality and Reliability Engineering; Operational Research; Work Design and Ergonomics; Highway and Traffic Engineering; Foundation Engineering; Informa-

tion Engineering; Electrical Machines; Solid State Electronic Engineering; Chemical Engineering; Biological Engineering; Petroleum Production Engineering; Industrial Metallurgy; Coal Preparation.

LL.M.: 2 years, exceptionally 1 year, after LL.B.

B.D.: not less than two years after a bachelor's degree approved by the Faculty of Arts.

(ii) DOCTORATES

Ph.D.: 2 years in any Faculty.

D.Mus., LL.D.: 3 years after M.A., M.Mus., M.Sc. or LL.M., or 5 years after the corresponding bachelor's degree.

D.Litt.: 5 years after the M.A., M.Mus., M.Sc. or LL.M., or 7 years after a bachelor's degree.

Note. The award of the degrees of D.Litt., D.Mus. and LL.D. are confined to Birmingham graduates.

(iii) HIGHER MEDICAL DEGREES

M.D., Ch.M., M.D.S.: 5 years after bachelor's degree.

DIPLOMAS AWARDED

(i) THEOLOGICAL DIPLOMAS

Diploma in Theology: 2 years for graduates of approved universities.

Diploma in Liturgy and Architecture: 1 year full-time for graduates or persons with equivalent qualifications.

Diploma in Pastoral Studies: 1 year full-time, 2 years part-time, normally for graduates.

(ii) DIPLOMAS IN EDUCATION

(awarded by the Institute of Education).

Certificate of Education: 1 year for graduates, 2 or 3 years for students at Colleges of Education in the Institute.

Diploma in Art Education: 1 year for teachers with not less than 5 years' appropriate teaching experience.

Diploma in Education: 1 year for teachers with not less than 5 years' appropriate teaching experience.

Diploma for Teachers of Educationally Sub-Normal Children: 1 year for teachers with not less than 5 years' appropriate teaching experience.

Supplementary Certificates: 2 years part-time. Awards offered in Mathematics and School Librarianship.

(iii) DIPLOMAS IN EDUCATION

(awarded by the University Department of Education)

Diploma in Educational Psychology: 1 year full-time for intending educational psychologists in the School Psychological Service or Child Guidance Clinics; for graduates.

Diploma in Psychology of Childhood: 1 year full-time for graduates and other approved persons.

Supplementary Certificate in Divinity: 1 year full-time.

Supplementary Certificate for Teachers of Blind Children: 1 year full-time.

(iv) DIPLOMAS IN OTHER SUBJECTS

Diploma in Commerce: 1 year postgraduate.

Diploma in Public Administration: 1 year postgraduate.

Diploma in Social Work: 1 year postgraduate.

Certificate in Social Studies: 2 years non-graduate.

Certificate in Child Service: 1-year course to train suitably qualified persons as children's officers and their assistants.

Diploma in Malting and Brewing: 1 year postgraduate.

Certificate in Malting and Brewing: 2 years (discontinued 1964).

Certificate in Malting: 2 years (discontinued 1964).

Diploma in Engineering Production and Management Principles: 1 year postgraduate.

Diplomas in Graduate Studies: 1 year postgraduate.

Courses leading either to the degree of M.Sc. or to a Diploma in Graduate Studies are listed above under M.Sc.

BIRMINGHAM COLLEGE OF ADVANCED TECHNOLOGY

(proposed University of Aston in Birmingham)

Gosta Green, Birmingham, 4

When the charter of the university designate has been granted courses now leading to the Dip.Tech. and external degree of London University will lead to the degrees of the new University. The classes to be awarded have not been designated at time of writing. A number of full-time postgraduate courses are being planned for 1966-67, which will lead to higher degrees after the granting of the charter.

FIRST DEGREES

B.Sc. General Honours Degree in Science: 3 years full-time. Students take two of the following subjects in their final examinations:

Botany or Physics; Chemistry; Geology; and Mathematics or Zoology.

B.Sc. Special Degree of Honours Standard: at least 3 years full-time. Courses are available in the following subjects:

Electrical Engineering; Civil Engineering; Mechanical Engineering; Production Engineering; Chemistry; Ophthalmic Optics; and Pharmacy.

B.Sc. Honours Degree with Integrated Professional Training: 4 years sandwich. Courses are available in the following subjects:

Electrical Engineering; Mechanical Engineering; Production Engineering; Metallurgy; Chemistry; Chemical Engineering; Applied Physics; Technological Mathematics; Mathematical Physics; Building; Civil Engineering; Building Economics and Measurement; Environmental Health; and Behavioural Science.

The College Associateship, A.C.T. (Birm.): the H.N.C. element in part-time courses leading to the College Associateship is being transferred to other colleges; courses are being continued for existing students only in 1965-66 and no new students will be admitted. Full-time courses for the Associateship will continue for the time being.

The Associateship is awarded to candidates who have completed satisfactorily courses of recognised academic standing which provide

adequate contact with the College. The Honours standard in the Associateship is equivalent to that of a university degree course.

HIGHER DEGREES

M.Sc.; Ph.D.: the College is preparing a variety of postgraduate courses lasting one year or more which are intended to lead to a Master's degree by course and examination. Candidates for admission to courses must have a good honours degree of an approved university or a qualification approved by the Academic Board of the College equivalent to a suitable honours degree or an approved professional or similar qualification. Courses are being planned in the following departments:

Electrical Engineering: with Mathematics, Engineering Materials and a compulsory project, together with one option selected from among Power Systems, Control Engineering and Pulse and Digital Systems (1 year). Precision Measurements and Instrumentation (1 year).

Mechanical Engineering: Applied Plasticity; Mechanics of Solids; Specialist topics (12 to 18 months).

Production Engineering: Numerical Control of Machine Tools (1 year).

Building and Civil Engineering.

Metallurgy: Critical Selection of Engineering Materials or Industrial and Management Metallurgy.

Chemistry: Chemistry and Technology of Polymers.

Chemical Engineering: 1 year full-time (of especial interest to junior engineers in the gas industry).

Physics (9 months full-time).

Mathematics: Conceptual and Mathematical Aids in Process Control (full-time). Operational Research (1 year full-time).

Industrial Administration: Industrial Administration; Applied and Experimental Psychology.

PROFESSIONAL QUALIFICATIONS

Part III Examination of the Institution of Electrical Engineers: three types of courses are to be offered:

- (1) 6 months full-time; (2) 2 years part-time, one day and one evening a week; or (3) 2-year evening course, 3 evenings a week.

Associate Membership of the Institute of Sewage Purification.

Licentiate and Associateship of the Institution of Metallurgists: full-time course for students under the Institution's old regulations.

Graduate Membership of the Royal Institute of Chemistry Part II: 1-year full-time course.

Graduateship of the Institute of Physics, part-time Ophthalmic Optics: at least 3 years full-time.

Graduate Membership of the Institute of Personnel Management: a block-release course for Personnel Officers.

OTHER COURSES

Electrical Engineering: specialist short courses are provided in:
Precision Measurements; Pulse and Digital Circuits; Protection of Power Systems; Applied Acoustics and Acoustic Measurements; U.H.F. and Microwave; Extra High Voltage Transmission; Modern Switchgear Practice; Industrial Electronics; Radio Waves — Launching and Propagation; Radio Guidance.

Mechanical Engineering: part-time specialist courses are provided in:

Theory of Structures for Mechanical Engineers; Design of Machine Elements; Automatic Control and Instrumentation; Gas Turbine Technology; Steam Engineering; Hydraulic Engineering; Metal Working Technology.

Production Engineering: specialist short courses are planned to meet the needs of senior engineers and managers who wish to study specialised aspects of Production Engineering on a short-term basis either as full-time courses or as part-time courses. Short courses cover:

Statistical Quality Control and Acceptance Sampling; Factory Layout and Materials Handling; Measurement and Quality Control; Statistical Methods in Reliability Analysis; Welding Technology; Gear Design, Manufacture and Measurement; Numerical Control of Machine Tools; Analysis of Machine Tools and Advanced Metrology (both for teachers of Production Engineering).

Certificate in Principles of Production Engineering: 1 term. Postgraduate general course. Other courses have been arranged in Welding Technology; Quality Control and Reliability Engineering; and Production Engineering.

A.C.T. (Birm.): part-time courses in Building and Civil Engineering.

The following part-time Associateship courses are being continued for students who hold the appropriate H.N.C.:

Building; Quantity Surveying; Structural Engineering; Civil Engineering; Municipal Engineering; and Surveying (this course is provided to assist students preparing for the examinations of the Royal Institution of Chartered Surveyors (Building and Quantities Sections)).

Part-time course in General Foremanship for Builders.

Two-year part-time day course in Public Health Inspection.

One-year part-time course in Food Inspection.

One-year part-time course in Smoke Inspection.

Diploma in Management Studies.

Diploma in Management Studies: part-time 3 years.

BRADFORD INSTITUTE OF TECHNOLOGY

(proposed University of Bradford)
Bradford, 7

As a College of Advanced Technology, the Institute offered courses leading to the Dip.Tech. and M.C.T., external first degrees (B.Pharm., B.Sc., B.Sc.(Eng.)) and higher degrees of London University, professional qualifications, and the Associateship and Postgraduate Diploma of the Institute.

The titles and classes of the degrees to be conferred by the new university are, at the time of writing, still being considered; but the Academic Board has accepted the title of B.Tech. (Bachelor of Technology) for four-year sandwich courses other than those in Social Sciences and Modern Languages.

FIRST DEGREES

Modern Languages, Honours degree: four-year courses, including a year abroad, are available in the following subjects:

French; German; Russian; Spanish.

Administrative and Business Studies, Honours degree: there are five special subjects within this three-year degree course

and students are required to choose one at the end of their first year. The subjects are:

Business Studies; Accountancy; Administrative Studies;
Psychology and Sociology; Management Science.

Social Sciences and Applied Social Studies, Honours degrees:

there are six combinations of special subjects within the three-year degree course in Social Sciences and after a common Foundation Year students are required to choose one of the following combinations:

Economics; Politics/Administration; History/Geography;
History/Politics; Sociology/Psychology.

The course for the degree in Applied Social Studies (four-year sandwich) combines academic education and professional training for students intending to make a career in social work.

B.Tech. Honours: four-year courses combining academic education and industrial training are available in the following subjects:

Applied Biology; Applied Physics; Industrial Chemistry;
Chemical Engineering; Civil Engineering; Electrical Engineering; Mechanical Engineering (including Production Engineering); Materials Science and Technology; Mathematics; Statistics; Textile Technology; Textile Design.

Honours degree: three-year courses are available in the following subjects:

Colour Chemistry and Colour Technology; Civil Engineering; Pharmacy General; Pharmacy Special; Textile Technology; Textile Design.

Ordinary degree: three-year courses are available in:

Civil Engineering; Mathematics and Statistics.

HIGHER DEGREES

When the new University receives its Charter it is expected that the present one-year full-time postgraduate courses will lead to a higher degree.

Institute Postgraduate Diploma: in Dyestuffs and Dyeing Technology.

Institute Postgraduate Diploma: in High Polymer Chemistry.

Institute Postgraduate Diploma: in Metals Technology.

Institute Postgraduate Diploma: in Automation in Chemical Engineering.

Institute Postgraduate Diploma: conversion course in Chemical Engineering.

Institute Postgraduate Diploma: in Powder Technology.

Institute Postgraduate Diploma: in Advanced Chemical Engineering.

Institute Postgraduate Diploma: in Industrial Administration.

M.Pharm., Ph.D.: in Pharmacy.

Institute Postgraduate Diploma: in Nuclear Reactor Technology (9 weeks).

Institute Postgraduate Diploma: in Textile Technology.

Diploma in Management Studies.

PROFESSIONAL QUALIFICATIONS

In general, first degree courses also prepare students for the appropriate professional qualifications and in most cases give total or partial exemption from professional examinations.

Diploma in Ophthalmic Optics: a three-year full-time course.

BRISTOL COLLEGE OF SCIENCE AND TECHNOLOGY

(proposed University of Bath)
Claverton Down, Bath

The College expects to be incorporated by Royal Charter as the University of Bath during 1965-66. Undergraduate courses formerly led to the Diploma in Technology, the College Diploma and the external London B.Pharm.

FIRST DEGREES

(i) FIRST DEGREES IN ARCHITECTURE

B.Sc. Honours: 4 years sandwich.

B.Arch.: 2 years after B.Sc. in Architecture. (Students also prepare for the Associateship examination of the Royal Institute of British Architects and for registration as architects.)

(ii) FIRST DEGREE IN PHARMACY

B.Pharm. Honours or Pass: 3 years.

(iii) FIRST DEGREE IN SCIENCE AND TECHNOLOGY

B.Sc. Honours or Pass: 4-year sandwich courses (4½-year sandwich courses in the case of subjects marked with an asterisk (*)) are available in the following subjects:

Aeronautical Engineering*; Applied Biochemistry; Applied Biology; Applied Physics; Building Technology; Chemistry (with optional biases in Applied Chemistry, Process Chemistry and Pure Chemistry); Economics and Administration; Electrical Engineering; Engineering Metallurgy; Horticulture; Mathematics; Mechanical Engineering*; Operational (Management) Engineering*; Production Engineering*; Sociology; Statistics.

HIGHER DEGREES

Students may be considered for admission to full- or part-time courses leading to the degrees of **M.Sc.** and **Ph.D.** in most departments. 1-year postgraduate courses which have hitherto led to graduate diplomas will now lead to the degree of M.Sc. Courses are available in Applied Solid State Physics, Control Engineering, Electronic and Telecommunication Engineering and Numerical Analysis.

DIPLOMAS AND CERTIFICATES AWARDED

Diploma in Industrial Administration: 1 year. The course, which is open to graduates or persons with equivalent qualifications, replaces those for the Diplomas in Personnel Administration and Training Administration.

Diploma in Language Studies: 1 year. The course, which is open to graduates and persons with equivalent qualifications, provides instruction in the techniques of interpreting, translating and precis-writing.

Diploma in Management and Operational Research: 1 year for graduates or persons with equivalent qualifications.

Diploma in Management Studies: 1 year.

College Certificate in Advanced Analytical Chemistry: part-time.

PROFESSIONAL QUALIFICATIONS

The College offers the following courses of direct preparation for the examinations of professional associations.

Graduate Membership of the Royal Institute of Chemistry: part-time or 2 years sandwich.

Part III examination of the Institution of Electrical Engineers: 26 weeks.

Graduate Membership of the Institute of Physics: 1 year full-time.

UNIVERSITY OF BRISTOL

Bristol, 2
(Abbreviation: Brist.)

FIRST DEGREES

(i) FIRST DEGREES IN ARTS

B.A. General Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 and 2), 3rd Class and Pass.

Subject to certain conditions candidates follow four of the subjects listed below for one year and three for the next two years:

Greek; Latin; French; German; Spanish; Russian; Italian;
English; History; Archaeology and Ancient History; Law;
Pure Mathematics; Philosophy; Economics; Geography;
Religious Knowledge; Drama; Music; History of European Art.

B.A. General Honours in Modern Studies: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 and 2), 3rd Class and Pass.

For their final examination students read Economics or Politics, French or German or Spanish or Russian and one subject, not already chosen, from among Economics; Politics; French; German; Spanish; Russian; English; History; Commercial Law; Constitutional and Public International Law; Pure Mathematics; Philosophy; Geography; Accounting.

B.A. Special Honours: 3 years, except in the Joint Schools of French and German and French and Spanish, when it is 4.

Classification of Honours: 1st Class, 2nd Class (Divs 1 and 2), 3rd Class and Pass.

Courses are available in:

Classics; Drama and Classics; Drama and French; Drama and German; Drama and Spanish; Drama and English; English; French; French and German; French and Spanish; Geography; German; Greek; Greek and English; History; Latin; Latin and French; Latin and Spanish; Mathematics; Music; Philosophy; Philosophy and English Literature; Philosophy and Classics; Philosophy and Mathematics; Philosophy and French; Spanish; Theology; Economics; Economics with Statistics; Economics with Accounting; Economics and Economic History; Economics and Politics; Economics and Sociology; Geography; Philosophy and Economics; Philosophy and Politics; Philosophy and Psychology; Politics and Sociology; Sociology and Psychology.

B.A. Honours in Architecture: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 and 2). The course leads on to the degree of B.Arch. or B.Sc.(Arch.), which is taken after a further 2 years' study.

LL.B. Ordinary or Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 and 2), 3rd Class.

B.Ed. Honours: a course leading to the degree of B.Ed. was introduced in 1965-66 for selected students in Colleges of Education in the University's Institute of Education.

(ii) FIRST DEGREES IN SCIENCE AND TECHNOLOGY

B.Sc. Ordinary: 3 years. Candidates must take either two ordinary and one subsidiary courses or one ordinary and three subsidiary courses.

B.Sc. General Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 and 2), 3rd Class.

Candidates must (1) take either one advanced course and two ordinary courses or one advanced course, one ordinary course and one subsidiary course and (2) take a course in the 'Development of Science'. The subjects available are:

Pure Mathematics; Applied Mathematics (Sub. and Ord. only); Auxiliary Mathematics (Ord.); Physics; Chemistry; Geology; Geography; Botany; Zoology; Anatomy (Ord. and Adv. only); Physiology; Microbiology; Philosophy; Economics (Sub. and Adv. only); Psychology.

B.Sc. Special Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 and 2), 3rd Class and Ordinary.

Courses are available in the following subjects:

Anatomy; Botany; Biochemistry; Chemistry; Geography;
Geology; Mathematics; Microbiology; Physics; Physiology; Psychology; Zoology.

B.Sc.(Dom.Sc.) Ordinary: 3 years.

B.Sc. Honours in Engineering: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 and 2) and Ordinary.

Courses are available in Aeronautical, Civil, Electrical and Mechanical Engineering.

(iii) FIRST DEGREES IN MEDICINE

M.B., Ch.B.: 6 years: total qualifying. The degree may be awarded with 1st or 2nd Class Honours and students may receive Distinctions in the subjects of the second, third and Qualifying Examinations.

B.D.S.: 5½ years. The degree may be awarded with 1st or 2nd Class Honours and students may receive Distinctions in subjects of the professional curriculum at the examiners' discretion.

B.V.Sc.: 5 years. The degree may be awarded with 1st or 2nd Class Honours and students may receive Distinctions in subjects of the second and subsequent examinations.

HIGHER DEGREES

(i) MASTERS' AND EQUIVALENT DEGREES

B.Mus.: 1 year from B.A. General or Special Honours in Music for Bristol graduates only; the degree may be awarded with Honours (1st Class, 2nd Class (Divs 1 and 2) and 3rd Class) or as a Pass degree.

M.A.: 2 years from B.A.; 3 years for non-graduates permitted to enter.

M.Ed.: 2 years from B.A.

M.Sc.: (a) by research in Science or Engineering—2 years from B.Sc., 1 year for Bristol Honours graduates. (b) by advanced study and research in Advanced Analytical Chemistry or Surface Chemistry and Colloids.

LL.M.: 2 years from LL.B.

(ii) DOCTORATES

Ph.D.: in all Faculties except Law; 2 years from first degree and open in exceptional cases to non-graduates.

D.Mus.: 5 years from B.Mus.; for Bristol graduates only.

D.Litt., D.Sc.: 6 years from first degree.

LL.D.: 6 years from first degree.

(iii) MEDICAL DEGREES

Ch.M.: 2 years from M.B., Ch.B. in General Surgery; Ophthalmology; Oto-rhino-laryngology; or Gynaecology.

M.D.: 2 years from M.B., Ch.B.; may be awarded with Distinction.

M.D.S.: 2 years from B.D.S.

HONORARY DEGREES

The degrees of Master and Doctor may be awarded as honorary degrees.

DIPLOMAS AWARDED

Diploma in Education: 1 year for qualified teachers with at least 3 years' experience.

Diploma in Child Study: for graduates or persons with approved qualifications; by examination and dissertation.

Licence in Dental Surgery: 4 years.

Diploma in Psychological Medicine (D.P.M.): in abeyance.

Diploma in Public Administration: candidates must have suitable previous education; in abeyance.

Advanced Diploma in Public Administration: for holders of the Bristol D.P.A.; in abeyance.

Diploma in Public Health: 1 year full-time or 18 months part-time or 15 months part- and full-time for medical graduates.

Diploma in Social Studies: 1 year postgraduate, by examination; may be awarded with Distinction.

CERTIFICATES AWARDED

Certificate in Education: 1 year for graduates; 2 or 3 years for students in the University Institute of Education's Colleges of Education.

Supplementary Certificate in Education: for qualified teachers who offer an approved subject of study.

Advanced Certificate in Education: 1 year full-time or 2 years part-time for experienced qualified teachers.

Certificate in Residential Work with Children: candidates must be at least 26; for residential staff of children's homes and schools for deprived, delinquent and handicapped children; 1 year; may be awarded with Distinction.

Certificate in Applied Social Studies: 1 year; may be awarded with Distinction.

Certificate in Youth Service: in abeyance.

Testamur in Bacteriology and Microbiology: 1 year for graduates in science, medicine or veterinary science.

Certificate in Drama: 1 year postgraduate.

Health Visitor's Certificate: 1-year course for fully trained midwives leading to the Certificate of the Royal Society of Health.

Certificate in Medical Physics: 1 year for graduates.

Certificate of attendance for foreign students: foreign students whose native language is not English may be admitted to part-time courses in English and in a limited number of arts and science subjects. No diploma is awarded, but a certificate of attendance is given.

BRUNEL COLLEGE

(proposed Brunel University)

Woodlands Avenue, Acton, London, W.3

The new university is to be rehoused on a site at Hillingdon, Uxbridge.

FIRST DEGREES

B.Tech. Honours: the following four-year sandwich courses are available;

Applied Biology; Applied Chemistry; Chemical Technology;
Mathematics; Metallurgy; Applied Physics; Psychology
(this course formerly led to the award of the Brunel

Diploma in Psychology); Social Sciences; Electrical Engineering; Mechanical Engineering; Production Technology.

B.Tech. Joint Honours in Engineering: the following four-year sandwich courses are available:

Electrical and Mechanical Engineering; Mechanical Engineering and Production Technology; Electrical Engineering and Production Technology.

HIGHER DEGREES

M.Sc., Ph.D.: facilities for research and continued study are available in the following departments:

Applied Biology; Chemistry (students may work for the Research Diploma of the Royal Institute of Chemistry); Metallurgy; Electrical Engineering and Technology; Mechanical Engineering; Physics (Pure and Applied); Production Technology; Psychology; and Social Science.

DIPLOMA

Brunel Diploma in Management: a one-year course for graduates below the age of 29 recognised by their employers as potential managers. Successful students obtain the Brunel Diploma and are eligible for the Joint Committee's Diploma in Management Studies, for exemption from Part C of the Examination of the Institution of Production Engineers and Part III of the Examination of the Institution of Mechanical Engineers.

UNIVERSITY OF CAMBRIDGE

(Abbreviation: Cantab.)

FIRST DEGREES

(i) FIRST DEGREES IN ARTS AND SCIENCE

B.A. Ordinary and Honours: this is the first degree in all subjects. 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 and 2), 3rd Class.

Degrees without Honours

Students may be awarded ordinary degrees on the results of Special Examinations in Greek; Latin; English; Geography; History; Law; certain Modern and Oriental Languages; Moral Sciences and certain Natural Sciences.

Candidates for Honours degrees must reach the prescribed standard in any two of the Tripos examinations, although in some cases one examination is sufficient. In most subjects there are two Tripos (or final) examinations, Part I coming at the end of a one- or two-year course of study and Part II after one or two years' more intensive study. The two Parts may be taken in different subjects. Both parts are classed.

Courses are available in the following subjects:

Arts

Anglo-Saxon; Archaeology and Anthropology; Architecture and Fine Arts; Classics; English; Geography; History; Modern and Mediaeval Languages; Moral Sciences; Music; Oriental Studies; Theology.

Social Sciences

Economics and Politics; Land Economy; Law.

Mathematics

Pure Mathematics; Applied Mathematics; Mathematics with Physics.

Natural Sciences

(Three subjects are followed in the first year, two or three in the second and either one or a more general course in the third.)

Anatomy; Biochemistry; Botany; Biology of Cells; Biology of Organisms; Chemistry; Crystalline State; Experimental Psychology; Fluid Mechanics; Genetics; Geology; History and Philosophy of Science; Materials Science; Mathematics for Science; Metallurgy; Mineralogy, Crystallography and Petrology; Pathology; Physics; Physiology; Theoretical Physics; Zoology.

Engineering

Chemical Engineering; Electrical Sciences; Mechanical Sciences (i.e. General Engineering).

Agriculture

The structure of the Triposes is as follows (the performance of students is classified in Part I as well as in Part III):

Parts I and II

Agriculture; Archaeology and Anthropology; Architecture and Fine Arts; Classics; Economics; English; Geography; History; Law; Mechanical Sciences (in which Part I

qualifies a student for his degree without further examination); Modern and Mediaeval Languages; Moral Sciences; Music; Natural Sciences (in which Part I qualifies a student for his degree without further examination); Oriental Studies.

One Part only

Anglo-Saxon; Chemical Engineering; Electrical Sciences; Land Economy. (The Tripos in the last three subjects can usually be taken only after obtaining Honours in another Honours examination.)

Parts I, II and III

Mathematics (in which Part II qualifies a student for his degree without further examination); Theology.

(ii) FIRST DEGREE IN MEDICINE

M.B., B.Chir.: 6 years. The student usually spends his first three years in Cambridge. If he has not taken the First M.B. examination before going to University, he must do so as a student, pass the Qualifying Examination in Anatomy and Physiology and the Examination in Pharmacology and obtain Honours in a Tripos (normally Part I of the Natural Sciences Tripos). At this point the student is usually qualified to take his degree of B.A. After 33 months' clinical study at a recognised hospital he takes the Final M.B. Examination for the conjoint degree of M.B., B.Chir.

(iii) FIRST DEGREE IN VETERINARY MEDICINE

Vet.M.B.: 6 years. Before going to University the student must pass or obtain exemption from the First M.B. Examination for medical students; he usually spends his first three years reading for the Natural Sciences Tripos and then takes the degree of B.A. After taking the B.A. degree, students begin a three-year course at the School of Veterinary Medicine. The Vet.M.B. degree is awarded after passing the Veterinary Examination, which is in two Parts.

SECOND DEGREES

LL.B. The degree of LL.B. may be awarded to candidates who have obtained honours in either part of the Law Tripos or, in the case of affiliated students (i.e. graduates of other universities), who have passed the Law Qualifying Examination II or who have graduated B.A. and are qualified to practise as barristers or solicitors or advocates or law agents in Scotland.

Mus.B. Candidates who have obtained honours in either part of the Music Tripos may take one or more sections of the examination for the degree of Mus. B. in their third or later years. Candidates who pass any two sections and have been in residence at the University for nine terms may take the degree.

Degree of Master of Arts (M.A.). Cambridge B.A.'s may be admitted to the degree without further study and on payment of a fee.

HIGHER DEGREES

M.Sc.: 2 years' research; thesis or dissertation, together with an oral or written examination.

M.Litt.: 2 years' research; thesis or dissertation, together with an oral or written examination.

B.D.: 5 years after admission to B.A., by dissertation or published work.

D.D.: 3 years after admission to B.D., by dissertation or published work.

LL.M.: 2 years after admission to B.A. or LL.B., by dissertation.

LL.D.: 8 years from first degree, by an original contribution to the advancement of the science or study of law.

Mus.M.: by examination; candidates must be Mus.B.'s of 2 years' standing.

Mus.D.: 8 years after first degree, by the submission of three works.

Sc.D. and **Litt.D.:** 8 years after first degree, by the submission of one or more published contributions to the advancement of science or learning.

Ph.D.: 3 years' research; thesis or dissertation, together with an oral or written examination.

M.Chir.: 2 years (5 years from 1967) after admission to M.B., B.Chir.

M.D.: 8 years after first degree, by the submission of published work.

HONORARY DEGREES

Honours degrees are awarded and are not normally of lower standing than Master's degrees.

DIPLOMAS AND CERTIFICATES AWARDED

Diploma in Agricultural Studies: 1 year for graduates or persons with approved previous education. Candidates must choose one of the following subjects:

Animal Husbandry; Crop Husbandry; Farm Management; Farm Mechanisation; Animal Science; Pedology; Agricultural Botany; Agricultural Entomology; Agricultural Economics; Agricultural Biometry. (Introduced 1966 in place of the Diplomas in Agriculture and Agricultural Science.)

Certificates in Social Anthropology, Physical Anthropology and Prehistoric Archaeology: open to any member of the University who is accepted by the Faculty Board of Archaeology and Anthropology and has taken a 1-year course of instruction.

Diploma in Architecture: for graduate students or approved persons, both with one year's office experience.

Diploma in Classical Archaeology: 1 year postgraduate.

Diploma in Economics: at least 1 year for research students.

Certificates of Advanced Study in Engineering: 1-year postgraduate courses in the Theory of Structures and Strength of Materials and in Control Engineering.

Certificate of Postgraduate Study in Engineering: 1- or 2-year course of advanced study and research for graduate research students; dissertation and oral.

Certificate of Proficiency in Estate Management (discontinued 1966): a non-graduate course giving exemption from the written qualifying examinations of the Royal Institution of Chartered Surveyors, the Chartered Land Agents' Society and the Chartered Auctioneers' and Estate Agents' Institute.

Diploma in Estate Management (discontinued 1966): non-graduate. Candidates chose one of the following subjects: Agricultural Tenant-Right; Economics of Land Use; Estate Finance; Farm Buildings and Estate Improvement; Forestry; Housing; Town and Country Planning; Valuation of Land and Buildings.

Certificate in Historical Studies: a one-year course of instruction, ending in an examination, for graduates with 1st or 2nd Class, Div. 1, Honours.

Certificate of Advanced Study in Law: intended for students who are unable to complete the residence requirements for the LL.B. degree; 1 year's research in English Law; Legal History; Roman Law; International Law.

Diploma in Roman Law: 1 year postgraduate.

Diploma in Comparative Legal Studies: 1 year's study for research students; thesis.

Diploma in International Law: 1 year's study for research students; thesis.

Diploma in Criminology: 1 year's postgraduate instruction; examination.

Diplomas in Mathematical Statistics and Numerical Analysis: 1 year's postgraduate instruction; examination.

Certificates of Competent Knowledge in Modern Languages: for undergraduate students; standard is that of 2nd Class Honours in a written examination.

Diploma in Slavonic Studies: 2 terms' instruction.

Certificates of Postgraduate Study in Natural Sciences: 1 year's postgraduate advanced study and training in research in certain specific sciences: Chemistry, Metallurgy, Chemical Microbiology and Plant Biochemistry. Dissertation and oral examination.

Certificate in the History and Philosophy of Science: 1 year postgraduate; examination.

Certificate of Proficiency in Christian Theology: undergraduates who pass all three examinations in Christian Theology in the Theology Tripos are entitled to the award of a Certificate.

CHELSEA COLLEGE OF SCIENCE AND TECHNOLOGY

(proposed University)
Manresa Road, London, S.W.3

The title of the new University will depend on its siting; the College proposes to move to a location outside London to allow for expansion.

FIRST DEGREES

All first degree courses can lead to an Honours degree, although in certain subjects a candidate may be permitted to take a Pass degree if he does not reach the standard required for Honours. The classification of Honours degrees is: 1st Class, 2nd Class (Divisions I and II), and 3rd Class.

The courses are of two kinds: (1) the General degree, which is in effect a joint Honours course; and (2) the Special degree in which one subject is studied intensively in depth.

In technological courses studies are closely related to industrial experience and the student spends his third year in industry. All courses last three years except for the technological degree courses.

B.Sc. (General). In the first year of the course, a student must take three subjects in one of the following combinations:

Botany, Chemistry, Mathematics; Botany, Chemistry, Physiology; Botany, Chemistry, Zoology; Botany, Geology, Zoology; Chemistry, Geology, Physics; Chemistry, Mathematics, Physics; Chemistry, Physics, Physiology; Chemistry, Physiology, Zoology; Geology, Mathematics, Physics; Mathematics, Physics, Physiology; Chemistry, Geology, Mathematics.

After the first year, a student must take courses in two subjects, both from Group A, or one from Group A and one from Group B.

Group A consists of the following subjects:

Biochemistry, Botany, Chemistry, Geology, Physics, Physiology and Zoology.

Group B consists of the following subjects:

Pure and Applied Mathematics, Pure Mathematics and Statistics.

B.Sc. (Special). Courses are offered in the following subjects: Applied Biochemistry; Botany; Chemistry; Geology; Mathematics; Applied Pharmacology; Physics; Physiology; and Zoology.

B.Pharm. (General Honours). This is a broadly based degree designed for students intending to enter the general practice of pharmacy. The subjects are Pharmacognosy, Medicinal Chemistry, Pharmaceutics, Pharmacology, the Law relating to Pharmacy and the Practice of Pharmacy. Students are expected to take a course in a foreign language designed both as an introduction to the understanding of technical literature and as a means of increasing conversational ability.

B.Pharm. (Single Honours). A limited number of students will be invited to proceed in their third year to the Single Honours degree, which is designed for intending specialists in a particular aspect of Pharmacy. Invitations will be made in the light of the second year examinations in the General Honours course. The third year will contain some material common to the General Honours course together with an option chosen from among: Pharmaceutics, Medicinal Chemistry, Pharmaceutical Physical Chemistry, Pharmacognosy or Pharmacology.

HIGHER DEGREES

(i) MASTERS' DEGREES BY COURSE

Courses of advanced study, consisting of lectures, seminars and tutorials, with laboratory work and research in appropriate cases, lead to Masters' degrees; the courses last at least one calendar year of full-time or two years of part-time study.

M.Sc.: courses are available in the following areas of study:

Analytical Chemistry; Biochemistry; Mathematics and Statistics; Materials Technology; Acoustics and Vibration Physics; Optics; Nuclear Physics; Solid State Physics; Quantum Mechanics; Physical Electronics; Supplementary Course in Electronic Circuits; History and Philosophy of Science.

M.Pharm.: courses are available in the following areas of study:
Pharmaceutical Analysis; Pharmaceutical Technology.

(ii) M.SC. AND PH.D. BY RESEARCH

Facilities exist in all Departments for research by members of staff and by graduate students, both full- and part-time. The course for the Ph.D. lasts at least two academic years full-time or four years part-time.

OTHER POSTGRADUATE COURSES

There are special courses in various fields, some of a professional nature, usually for part-time postgraduate students; a **Post-graduate Diploma** may be awarded. Courses are available in aspects of the following areas of study:

Botany and Zoology; Chemistry; Geology; Mathematics; Pharmacy; Physics; Physiology and Pharmacology.

UNIVERSITY OF DURHAM

Old Shire Hall, Old Elvet, Durham
(Abbreviation: Dunelm.)

FIRST DEGREES

(i) FIRST DEGREES IN ARTS

B.A. in General Studies (Ordinary): 3 years. Classification of Award: Classes I, II and III. Distinctions may be awarded for performances in individual subjects.

Students follow a preliminary course for one year and a final course for the next two years. They must choose three courses from among:

Latin or Economics or History and Philosophy of Science;
Hebrew or Politics or Applied Mathematics or Archaeology;
Russian or Law or Business Studies or Arabic;
Greek or Psychology; Geography or Music or History and Theology of the Christian Church; French or Pure Mathematics or Ancient History; Spanish or Philosophy; German or Anthropology; English or Persian; Modern History or Turkish.

B.A. General in Social Studies (Ordinary): 3 years. Classification of Award: Divisions I, II and III.

B.A. Honours in Arts: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs-1 and 2), 3rd Class and Pass.

Courses are available in the following subjects:

Classical and General Literature; English Literature; English Language; English and Philosophy; French; French and German (Joint Honours possible); French and Spanish (Joint Honours possible); Geography; Geography and Anthropology; German; German and Spanish (Joint Honours possible); Mathematics; Modern History; Music; Philosophy; Philosophy and Psychology; Psychology; Psychology and Economics; Russian; Spanish; Theology.

B.A. Honours in Social Studies: length and classification as in Arts.

Courses are available in the following subjects:

Economics and Economic History; Social Theory and Administration; Politics and Economics; Politics and Law; Economics and Law; Economics and Social Theory; Politics and Social Theory; Social Theory and Law.

B.A. Honours in Oriental Studies: length and classification as in Arts.

Courses are available in the following subjects:

Classical Hebrew/Old Testament; Ancient Egyptian/Nubian;
Classical Arabic/Islamic; Modern Arabic; Modern Turkish/Persian; Chinese.

B.A. Honours in Modern Middle Eastern Studies: length and classification as in Arts.

Courses are available in the following subjects: *Either* Geography *or* Politics together with Arabic or Persian or Turkish.

B.Mus. Ordinary External. The course for the degree of B.Mus., which is awarded without Honours, is external.

(ii) FIRST DEGREES IN SCIENCE

B.Sc. General: 3 years. Classification of Award: candidates of sufficient merit may be placed in the First Division.

Students take a common Qualifying Examination after two years and then read two subjects for not less than one year.

B.Sc. Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 and 2), 3rd Class.

Courses are available in the following subjects:

Botany; Chemistry; Engineering Science; Geography;
Geology; Mathematics; Applied Physics; Physics; Psychology; Zoology.

B.Sc. Joint Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 and 2), 3rd Class and Pass.

Courses are available in the following subjects:

Applied Physics/Chemistry; Botany/Chemistry; Botany/Geography; Botany/Zoology; Chemistry/Geology; Chemistry/Zoology; Geography/Zoology; Geology/Physics; Geology/Zoology; Mathematics/Physics; Psychology/Zoology.

HIGHER DEGREES

(i) MASTERS' AND EQUIVALENT DEGREES

M.A.: 2 years' postgraduate research.

M.Ed.: 1-year course for graduates, five years from their first degree.

M.Sc.: 2 years' postgraduate research or by one-year courses in Applied Mathematics; Electronics; Geophysics; Radiochemistry.

B.D.: a period of 3 years' study after first degree; examination and thesis.

M.Litt.: 3 years' postgraduate research.

M.Mus.: 3 years' postgraduate work.

(ii) DOCTORATES

Ph.D.; D.D.; D.Litt.; D.Sc.; D.Mus.

HONORARY DEGREES

D.C.L. (Honorary only); all higher degrees except Ph.D.

DIPLOMAS AWARDED

Diploma in Anthropology: 2 years for graduates of approved universities.

Diploma in Arabic: 1 year's instruction for graduates of approved universities.

Diploma in the Archaeology of Britain: 1 year's instruction for graduates of approved universities.

Diploma in Biblical Studies: 1 year's instruction for graduates of approved universities; designed mainly for intending teachers.

Diploma in Economic Studies: 2 years (for students at Fourah Bay College only).

Diploma in Education: 1 year for graduates of approved universities.

Diploma in Public Administration: 2 years (for students at Fourah Bay College only).

Diploma in Theology: 2 years for graduates of Commonwealth universities; may be awarded with Distinction.

UNIVERSITY OF EAST ANGLIA

Earlham Hall, Norwich, NOR 05G, Norfolk

FIRST DEGREES

(i) FIRST DEGREE IN ARTS

B.A. Honours: 3 or 4 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Pass.

Courses are available in the following four Schools:

School of English Studies

Students may specialise in English History or English Literature.

School of European Studies

Students may specialise in Historical Studies, or Literary Studies, or Regional (French, German or Russian) Studies.

School of Fine Arts

Students may specialise in the History of Art or Architecture or Music.

School of Social Studies

Students may specialise in one or more subjects chosen from among Economics, Economic History, Philosophy and Sociology.

(ii) FIRST DEGREE IN SCIENCE

B.Sc. Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Pass.

Courses are available in the following three Schools:

School of Biological Sciences

Students may specialise in three subjects chosen from among Animal Physiology, Physiology and Comparative Morphology of Plants, Field Studies and Marine Biology, Genetics, Microbiology, Biochemistry and Biophysics.

School of Chemical Sciences

Students may specialise in Inorganic, Organic, Physical or Theoretical Chemistry, or Chemistry with Economics and/or Languages, or Chemistry with Biochemistry and/or Biophysics.

School of Mathematics and Physics

Students may specialise in Mathematics or Physics.

HIGHER DEGREES

(i) MASTERS' DEGREES

M.A.: 1-year courses are available in the following subjects:

Techniques of Applied Economics; Mathematical Logic; Philosophy; Locke, Berkeley and Hume; Advanced General Sociology.

M.Sc.: 1-year courses are available in the following subjects:

Chemical Spectroscopy (4 terms); Physical Organic Chemistry (4 terms); Theoretical Mechanics (3 terms).

(ii) DOCTORATE

Ph.D.: 3-year course of study and research.

UNIVERSITY OF EDINBURGH

Edinburgh
(Abbreviation: Edin.)

FIRST DEGREES

(i) FIRST DEGREES IN ARTS

M.A. Ordinary: 3 years.

M.A. Honours: 4 or 5 years. Classification of Honours: 1st Class, 2nd Class, 3rd Class and any subdivision which the Senate of the University may decide.

Courses are available in the following subjects:

Archaeology; Celtic Studies; Classics; Economic Science; English Language and Literature; Fine Art; English Literature and Greek; English Literature and Latin; French and History; French Language and Literature with contemporary European Institutions; French Language and General Linguistics with Phonetics; General and Economic History; Geography; Greek and Sanskrit; Hispanic Studies; History; Latin and Sanskrit; Mathematics and Physics; Mental Philosophy; Modern Languages (Arabic, English Language, English Literature, French, German, Italian, Persian, Russian, Spanish, Turkish); Politics; Politics and Modern History; Psychology; Sanskrit; Scottish Historical Studies; Semitic Languages; Social Anthropology; Sociology; Sociology and Politics; Social Anthropology and Sociology.

B.Arch. Honours: 5 years. Classification of Honours: 1st Class, 2nd Class and 3rd Class.

B.Com. Ordinary: 3 years.

B.Com. Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 and 2), 3rd Class.

B.Sc. (Social Science) Ordinary: 3 years.

B.Mus. Ordinary: 4 years, if students are not exempted from the 1st year.

B.Mus. Honours: 5 years, if students are not exempted from the 1st year. Classification of Honours: 1st Class, 2nd Class.

LL.B. Ordinary: 3 years.

LL.B. Honours: 4 years. Classification of Honours: 1st Class, 2nd Class and 3rd Class.

M.A. Ordinary with B.Com.: not less than 5 years.

M.A. Ordinary with LL.B.: not less than 5 years.

M.A. Ordinary with B.Sc.: not less than 5 years.

M.A. with R.G.N. and Diploma in Nursing Studies: 5 years Ordinary, 6 years Honours. The course leads to the degree of M.A. and the Certificate of the General Nursing Council for Scotland (R.G.N.). A Diploma in Nursing Studies may be awarded for a dissertation submitted not less than a year after the award of the Certificate.

(ii) FIRST DEGREES IN SCIENCE AND TECHNOLOGY

B.Sc. Ordinary: 3 or 4 years. Three-year courses are available in pure science subjects, engineering subjects and forestry. Four-year courses are available in agriculture, chemical technology and mining.

B.Sc. Honours: 4 years, or 5 years in agriculture. Classification of Honours in Pure Science, Agriculture, Forestry and Engineering: 1st Class, 2nd Class and 3rd Class. Classification of Honours in Mining and Chemical Technology: 1st Class and 2nd Class.

The following courses are available:

Anatomy; Astrophysics; Bacteriology; Biochemistry; Botany; Chemistry; Chemical Physics; Genetics; Geography; Geology; Mathematical Physics; Mathematical Science; Pharmacology; Physics; Physiology; Psychology; Zoology; Agriculture; General Agriculture; Agricultural Economics; Agricultural Science; Ecological Science; Forestry; Civil Engineering; Electrical Engineering; Mechanical Engineering; Chemical Engineering; Mining.

B.Sc. with R.G.N. and Diploma in Nursing Studies: this course is similar to that for the M.A. with R.G.N. and Diploma in Nursing Studies.

(iii) FIRST DEGREES IN MEDICINE

M.B., Ch.B.: 6 years.

B.D.S.: 5 years. Classification of Award: the degree of B.D.S. may be awarded with Honours.

B.V.M. & S. (Bachelor of Veterinary Medicine and Surgery): 5 years. Classification of Award: the degree of B.V.M. & S. may be awarded with Honours for special merit in professional examinations over the whole course.

HIGHER DEGREES

(i) MASTERS' AND EQUIVALENT DEGREES

B.Ed.: by thesis and examination after a 2-year course; the degree may be awarded with Distinction.

B.D.: by thesis and examination; the degree may be awarded with 1st Class, 2nd Class and 3rd Class Honours, or any subdivision which the Senate of the University may decide.

M.Arch.: 2 years (1 year for Edinburgh Honours graduates).

M.Sc.: 1 year for Edinburgh Honours graduates.

M.Litt.: 2 years.

M.Theol.: 2 years.

M.Sc.(Soc.Sci.): 2 years.

(ii) DOCTORATES

Ph.D.: 3 years.

D.Mus.: by thesis; not less than 3 years after graduation.

D.Litt.: by thesis; not less than 5 years after graduation.

D.Sc.: by thesis; not less than 5 years after graduation.

LL.D.: by thesis; not less than 7 years after graduation.

(iii) HIGHER MEDICAL DEGREES

M.D.: by thesis; not less than 2 years after graduation.

D.V.M. & S.: by thesis; not less than 3 years after graduation.

Ch.M.: by thesis; not less than 5 years after graduation.

HONORARY DEGREES

M.A.; LL.D.; D.D.; D.Mus.; D.Litt.; D.Sc.

DIPLOMAS AWARDED

(i) POSTGRADUATE DIPLOMAS IN ARTS AND SOCIAL SCIENCE

Applied Linguistics: 1 year; open to graduates with at least 3 years' experience in the teaching of English as a second language or in the teaching of other languages.

English Studies: 1 year; open to Edinburgh and other graduates.

General Linguistics: 1 year; open to Edinburgh and other graduates.

History of Art: 1 year; open to Edinburgh graduates and diplomates of colleges of art.

Islamic Studies: 1 year; open to Edinburgh and other graduates.

Phonetics: 1 year; open to Edinburgh and other graduates.

African Studies: 1 year; open to graduates whose previous experience and studies form a suitable preliminary training.

Architectural Acoustics: 1 year; open to Physics Honours graduates or qualified architects.

Civic Design: 1 year for Architecture graduates, 2 years for other graduates.

Clinical Psychology: 2 years; open to graduates with Honours in Psychology or a qualification recognised by the British Psychological Society.

Education: 1 year; open to persons who have taken a professional course of training or have had at least 3 years' teaching experience and have completed a graduation course in arts or science. The Diploma is awarded on the completion of University courses and examinations in Psychology, the Theory and History of Education and Modern Educational Problems and Systems.

Geography: 1 year; open to Honours graduates in Geography and to others who have reached a similar standard.

Landscape Architecture: 1 year; open to graduates and other persons whose qualifications are acceptable to the Faculty of Social Science.

Management Studies: 1 year; open to graduates and other persons whose qualifications are acceptable to the Faculty of Social Science.

Regional Planning: 1 year; open to graduates whose previous studies form a suitable preliminary training.

Social Anthropology: 1 year; open to graduates and other persons whose qualifications are acceptable to the Faculty of Social Science.

Social Study: not less than 1 year; open to graduates of British and approved universities with certain limitations as to degree subject taken.

(ii) POSTGRADUATE DIPLOMAS IN SCIENCE

Animal Genetics: 1 year; open to Honours graduates in a Biological subject or in Mathematics.

Applied Dynamics: 1 year; open to Honours graduates in Engineering, Mathematics or Physics.

Biophysics: 1 year; open to Honours science graduates or medical graduates.

Chemical Pharmacology: 1 year; open to Honours Chemistry graduates and Associates of the Royal Institute of Chemistry.

Computer Science: 1 year; open to Honours graduates.

Electronics and Radio: 1 year; open to Honours graduates in Electrical Engineering, Mathematics or Physics.

Fluid Dynamics: 1 year; open to Honours graduates in Physics, Mathematics, Chemistry or Engineering.

Forestry: 1 year; open to Forestry graduates of an approved university other than Edinburgh.

Physics of Elementary Particles: 1 year; open to Honours graduates.

Plant Taxonomy: 1 year; open to Honours Botany graduates.

Rural Science: 1 year; open to Honours graduates in Science or Economics or to Ordinary graduates in Agriculture of Edinburgh and other approved universities.

(iii) POSTGRADUATE DIPLOMAS IN MEDICINE

Medical Services Administration (D.M.S.A.): 1 year; open to graduates.

Psychological Medicine (D.P.M.): 2 years part-time.

Public Health (D.P.H.): 1 year; open to Edinburgh medical graduates and to other persons holding registrable qualifications.

Radiodiagnosis (D.M.R.D.): 18 months; open to Edinburgh medical graduates and to other persons holding registrable qualifications.

Radiotherapy (D.M.R.T.): 2 years; open to Edinburgh medical graduates and to other persons holding registrable qualifications.

Tropical Medicine and Hygiene (D.T.M. & H.): 6 months; open to Edinburgh medical graduates and to other persons holding registrable qualifications.

Tropical Veterinary Medicine (D.T.V.M.): 6 months; open to graduates in Veterinary Medicine and Surgery.

Veterinary State Medicine (D.V.S.M.): open to graduates in Veterinary Medicine and Surgery.

CERTIFICATES AWARDED

Child Care: 1 year; open to persons who hold a degree, diploma or certificate in Social Study.

Educational Studies: 1 year; open to non-graduates holding a Scottish teacher's certificate or a teacher's certificate acceptable to the Board of Studies as of equal standing.

Medical Social Work: 1 year; open to persons over the age of 21 who hold a degree, diploma or certificate in Social Study.

Nursing Studies: 1 year; advanced nursing administration for nursing administrators; open to Registered General Nurses and to graduates of approved universities who have the requisite nursing qualifications.

Nursing Studies: 2 years; advanced nursing education for Nurse Tutors.

Psychiatric Social Work: 2 years; open to persons who hold a diploma or certificate in Social Study or a degree in Sociology.

Public Administration: 2 years; open to persons whose education is up to university entrance standard.

Social Study: 2 years; open to persons whose education is up to university entrance standard.

UNIVERSITY OF ESSEX

Wivenhoe Park, Colchester, Essex

FIRST DEGREE

B.A. Honours: 3 years. This is the first degree in both Arts and Science subjects. Students who do not reach the standard for Honours may be awarded a Pass degree. Courses are available in the following four Schools—students may specialise in the subjects indicated at the end of their first year:

School of Social Studies

Economics; Government; Mathematical Social Science; Sociology.

School of Comparative Studies

Government; Literature.

School of Physical Sciences

Chemical Physics; Chemistry; Mathematics; Physics; Theoretical Physics.

School of Mathematical Studies

Economics; Government; Mathematical Social Science; Mathematics; Physics; Sociology; Theoretical Physics.

HIGHER DEGREES

(i) MASTERS' DEGREES

M.A.: 1 year. Courses are available in:

Educational Sociology; Political Behaviour; Social Administration; Sociology of Science; Underdeveloped Countries.

M.Sc.: 1 year. Courses are available in:

Fluid Mechanics; Quantum Electronics; Town Design.

(ii) DOCTORATE

Ph.D.: 3-year course of study and research.

UNIVERSITY OF EXETER

Exeter

(Abbreviation: Exet.)

FIRST DEGREES

(i) FIRST DEGREES IN ARTS

B.A. General (discontinued; last students admitted October 1964): 3 years. Classification of Award: the degree may be awarded with Distinctions in three or two subjects or in one or with Pass.

Students must choose an approved combination of three subjects from among:

Ancient History; Applied Mathematics; British Archaeology; Economics; English; French; Geography; German; Greek; History; Latin; Law; Music; Philosophy; Psychology; Pure Mathematics; Russian; Sociology; Spanish; Theology.

B.A. Single or Combined Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 and 2), 3rd Class and Pass. The following courses are available:

Classics; English; English and French; English and Greek; English and Latin; English and Philosophy; French and Geography; French and German; French and Latin; Geography and Archaeology; Geography and Government; Geography and History; German and English; German and Latin; German and Philosophy; Greek; Greek and Philosophy; History; History and Archaeology; Latin; Philosophy; Philosophy and Government; Philosophy and Psychology; Philosophy and Sociology; Russian and French; Russian and German; Russian and Government; Spanish and French; Spanish and German; Spanish and Latin; Theology.

A single-Honours course for the B.A. degree in French, German, Russian, Spanish or Geography may be taken with an approved additional subject chosen from among:

British Archaeology; Economics; English; European History; French; French History and Civilisation; German; Greek; Italian; Latin; Music; Philosophy; Russian; Spanish.

A single-Honours course for the B.A. degree in Mathematics may be taken with an approved subsidiary subject.

B.A. General Honours in Social Studies: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 and 2), 3rd Class.

Students take a course in three subjects chosen from among:

Economic History, Economics and Government; Economic History, Economics and Sociology; Economic History, Economics and Statistics; Economic History, Sociology and Government; Economics, Sociology and Government; Economics, Sociology and Law; Economics, Sociology and Statistics; Economics, Government and Law; Economics, Government and Statistics; Economics, Statistics and Psychology; Sociology, Government and Law; Sociology, Statistics and Psychology.

B.A. Honours in Social Studies: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 and 2), 3rd Class.

Students may take Single or Combined Honours courses in a subject or subjects chosen from among the following:

Economic History and Economics; Economic History and Geography; Economic History and Government; Economic History and Sociology; Economics; Economics and Geography; Economics and Government; Economics and Law; Economics and Sociology; Economics and Statistics; Geography; Government; Government and Law; Economic History; Political History and Government; Psychology; Sociology; Sociology and Geography; Sociology and Government; Sociology and Law; Sociology and Statistics.

LL.B. Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 and 2), 3rd Class and Pass.

(ii) FIRST DEGREES IN SCIENCE

B.Sc. Combined Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 and 2), 3rd Class and Pass.

Students read two Principal subjects for three years and one subsidiary subject for one year.

B.Sc. Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 and 2), 3rd Class and Pass.

Students read one main subject together with one additional and one subsidiary subject. Main courses are available in:

Botany; Chemistry; Geography; Geology; Mathematics; Physics; Psychology; Zoology.

B.Sc. Honours in Applied Science: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 and 2), 3rd Class and Pass. Courses are available in Chemical Engineering and Engineering Science.

(iii) INTER-FACULTY FIRST DEGREES

B.A. Honours in European Studies: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 and 2), 3rd Class.

Students read six subjects—English and European History, English Literature, History and Philosophy of Science and three from among the following combinations:

Biology/Theology/French; Biology/Theology/German; Biology/Theology/Latin; Biology/Theology/Greek; Biology/Law/French; Biology/Law/German; Biology/Law/Latin; Biology/Law/Greek; Geology/Theology/French; Geology/Theology/German; Geology/Theology/Latin; Geology/Theology/Greek; Geology/Law/French; Geology/Law/German; Geology/Law/Latin; Geology/Law/Greek.

B.Sc. Honours in Science, Social Studies and Philosophy: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 and 2), 3rd Class.

Students read four subjects—Philosophy, Mathematics and two chosen from among the following combinations:

Chemistry and Economics; Chemistry and Government;
Chemistry and Sociology; Physics and Economics; Physics
and Government; Physics and Sociology.

HIGHER DEGREES

(i) MASTERS' DEGREES

M.A.; M.Sc.; LL.M.: a minimum of 1 year's study. The degree of M.Sc. may, in certain circumstances, be awarded to non-graduates.

(ii) DOCTORATES

Ph.D.: a minimum of 2 years' research

D.Litt.; D.Sc.; LL.D.: open to Exeter graduates of at least 7 years' standing. The degree of Ph.D. in science may, in certain circumstances, be awarded to non-graduates.

HONORARY DEGREES

Any degree of the University may be awarded as an honorary degree.

DIPLOMAS AWARDED

Diploma in Education: 1 year full-time, 3 years part-time; for serving teachers; standard beyond that of the Certificate in Education.

Diploma in Public Administration (D.P.A.): 2 years; may be awarded with Distinction or Pass.

Advanced Diploma in Public Administration: 1 year full-time for graduates or persons with approved qualifications.

Diploma in Social Administration (D.S.A.): 2 years; may be awarded with Distinction or Pass.

Graduate Diploma in Public Administration (Grad. D.P.A.): 1 year.

CERTIFICATES AWARDED

Certificate in Education: 1 year for graduates, 2 or 3 years for students in the University Institute of Education's Colleges of Education.

Testamur in English Language and Literature for Overseas Students: 1 year.

Testamurs of Proficiency in French and German: no fixed period.

Graduate Certificate in Social Work: 4 terms, may be awarded with Distinction or Pass.

POSTGRADUATE MEDICAL COURSES

The Postgraduate Medical Institute was established in 1963 to provide refresher courses for overseas medical graduates and for United Kingdom medical graduates returning from service overseas. Short courses are provided for resident staff studying for higher medical qualifications.

UNIVERSITY OF GLASGOW

Glasgow, W.2
(Abbreviation: Glas.)

FIRST DEGREES

(i) FIRST DEGREES IN ARTS

M.A. Ordinary: 3 years.

M.A. Honours: 4 years. Classification of Honours: 1st Class, 2nd Class or 3rd Class.

Courses are available in:

Celtic (Irish and Scottish Gaelic, Manx, Welsh and Breton);
Classics; English Language and Literature; Geography
(Regional and Systematic); History; Mental Philosophy;
Modern Languages (any two from among Arabic, French,
German, Hispanic Studies, Italian, Norwegian, Russian);
Psychology; Semitic Languages (Hebrew and Arabic).

Students may read for a combined Honours degree; the combinations of subjects available are:

Archaeology and either Geography or Mediaeval History or
Scottish History.

Astronomy and either Mathematics or Physics.

Economic History and either Geography or Modern History
or Political Economy or Politics.

Greek and either English Literature or Russian or Philo-
sophy.

History of Fine Art and either Greek or Latin or Mediaeval
History or Modern History or a Modern Language or
Music or Philosophy or Psychology.

Latin and either English Literature or a Modern Language.

Mathematics and either Physics or Political Economy or
Philosophy.

Modern History and either a Modern Language (excluding
Arabic, Italian and Norwegian) or Political Economy or
Politics.

Music and either English Literature or History or Mathe-
matics or Physics or Philosophy or Psychology or a
Language.

Philosophy and either English Literature or History or
Political Economy or Politics or Psychology.

Political Economy and either Politics or Psychology or
Russian or Statistics.

Spanish and Portuguese Studies with Latin-American
Studies.

B.Mus.: 3 years. Classification of Award: the degree may be
awarded with 1st Class or 2nd Class Honours or as a Pass degree.

LL.B. Ordinary: 3 years.

LL.B. Honours: 4 years. Classification of Honours: 1st Class,
2nd Class or 3rd Class.

B.Ed.: 4 years. A new course, to be introduced in October 1966,
provided partly by the University and partly by Jordanhill College
of Education.

(ii) FIRST DEGREES IN SCIENCE AND TECHNOLOGY

B.Sc. Ordinary: 3 years. Selection of students for Ordinary or Honours courses in Pure Science, Agriculture and Engineering is made at the end of the first or second year. Courses for the Ordinary degree of B.Sc. are available in Pure Science subjects, Agriculture, Civil, Electrical, Mechanical Engineering and Naval Architecture.

B.Sc. Honours: 4 years. Classifications of Honours:

Pure Science: 1st, 2nd or 3rd Class in Principal subjects.

Agriculture: 1st, 2nd or 3rd Class.

Pharmacology: 1st or 2nd Class or Ordinary.

Engineering: 1st, 2nd or 3rd Class.

The following courses are available:

Pure Science

Anatomy; Astronomy; Bacteriology; Biochemistry; Biochemistry and Bacteriology; Botany; Chemistry; Genetics with Biochemistry; Genetics with Physiology; Genetics with Zoology; Geography; Geology; Mathematics; Physics; Physics and Astronomy; Physics and Chemistry; Physics and Mathematics; Pathology and Bacteriology; Pharmacology; Physiology; Zoology.

Agriculture

Agriculture; Agricultural Botany; Agricultural Chemistry; Agricultural Zoology; Agricultural Economics.

Engineering

Aeronautical; Civil; Electrical; Mechanical; Naval Architecture.

(iii) FIRST DEGREES IN MEDICINE AND DENTISTRY

M.B., Ch.B.: 6 years. The degree may be awarded with Honours or Commendation.

B.D.S.: 5 years.

B.V.M.S. (Bachelor of Veterinary Medicine and Surgery): 5 years. The degree may be awarded with Honours or Commendation.

HIGHER DEGREES

(i) MASTERS' AND EQUIVALENT DEGREES

B.Litt.; B.Phil.; M.Sc. (in Science and Engineering): 2-year courses.

Ed.B. Honours (1st Class, 2nd Class or 3rd Class): awarded after examination to graduates who have taken a 3-year course, consisting of a First (or Diploma in Education) stage and a Second (or Honours) stage. The title of the degree will be changed to M.Ed. on the introduction of the new first degree course leading to the B.Ed. (*see above*).

LL.M.: 2 years full-time or 3 years part-time.

B.D.: 3 years.

(ii) DOCTORATES

Ph.D.: 3 years, by thesis and examination (which may not be required).

D.Sc.: by thesis and examination (which may not be required); non-Glasgow graduates must do 2 years' research.

D.Mus.: by examination; non-Glasgow graduates must do 2 years' research.

D.Litt.: open only to graduates of 7 years' standing, who must submit a published work.

LL.D.: open to graduates of Scottish universities of 7 years' standing, who must submit a published work.

(iii) MEDICAL DEGREES (open only to Glasgow graduates)

M.D.; Ch.M.; M.D.S.; D.V.M.; M.V.S. (Master of Veterinary Surgery): by thesis and examination, which may not be required.

HONORARY DEGREES

M.A.; B.Sc.; M.Sc.; D.Litt.; D.D.; LL.D.

DIPLOMAS AWARDED

Diploma in Education: 1 year postgraduate; first year of Ed.B. course.

Diploma in Public Administration (D.P.A.): 3 years part-time.

Diploma in Applied Social Studies: 1 year postgraduate; intended to qualify holders of a degree or Certificate in Social Studies for a career in social work.

Diploma in Dramatic Studies: 2 years for Arts graduates.

Diploma in Economic Development: 1 year postgraduate.

Diploma in Public Health (D.P.H.): 1 year postgraduate.

Diploma in Clinical Psychology (D.C.P.): 2 years postgraduate.

Diploma in English Language and Applied Linguistics: 1 year postgraduate.

Diploma in Linguistics and Phonetics: 1 year postgraduate.

Diploma in Numerical Analysis: 1 year postgraduate.

Diploma in Cartography: 1 year postgraduate.

Diploma in Photogrammetry: 1 year postgraduate.

Diploma in Entomology: 1 year postgraduate.

Diploma in Mediaeval Philosophy: 1 year postgraduate.

Diploma in Roman Law: 1 year for graduates in Arts or Law.

Diploma in Educational Psychology: 2 years for Ed.B.'s or Honours graduates in Psychology.

Diplomas of Special Study (at least 1 year) are awarded in the following subjects:

Islamic History; Greek History and Archaeology; Roman History and Archaeology; Comparative Philology; Romance Philology; Psychology; Agricultural Economy; Social Geography; Soviet Studies (1 or 2 years for Honours graduates).

CERTIFICATES AWARDED

Certificate in Industrial Administration: 1 year.

Certificate in Thermodynamics: 1 year postgraduate.

Certificate in Social Study: 2 years (1 year for graduates).

Certificate in Dramatic Studies: 3 years.

Certificates for Special Study (at least 1 year) are awarded in the following subjects:

Semitic Philology; Greek History; Roman History; Psychology; Islamic History; Sociology.

HERIOT-WATT COLLEGE(University Designate)
Edinburgh

The College expects to be incorporated by Royal Charter as Heriot-Watt University during 1965-66. Full-time courses at the College have hitherto led to the College Associateship (A.H.-W.C.), awarded in two classes and at pass standard, which was recognised as being of first degree standard. The Fellowship of the College (F.H.-W.C.), awarded on the presentation of a thesis, was instituted in 1951.

FIRST DEGREES

Ordinary Degrees: courses are offered in Brewing (3 years) and Mechanical Engineering (4 years); the latter course leads to the degree of B.Sc.

Honours Degrees: 4-year courses are offered in the subjects listed below. The courses marked with an asterisk (*) lead to the degree of B.Sc.; the award in the other courses had not been specified at the time of writing. Classification of Honours: 1st Class, 2nd Class, 3rd Class or Pass.

Applied Biochemistry; Applied Chemistry; Applied Mathematics*; Applied Physics*; Building*; Chemical Engineering; Civil Engineering; Civil Engineering applied to Gas Engineering; Electrical and Electronic Engineering; Mechanical Engineering*; Mining Engineering*; Pharmacy.

HIGHER DEGREES

M.Sc. (by course); **Ph.D.**

DIPLOMAS AWARDED

Diploma in Brewing: 1 year postgraduate.

National Diploma in Mining: 3 years full-time after the award of the O.N.C. in Mining.

College Diploma in Commerce: conjoint and concurrent course with Moray House College of Education, Edinburgh (first 3 years of a 4-year course for the Teacher's Diploma in Commercial Subjects).

UNIVERSITY OF HULL

Hull, Yorkshire
(Abbreviation: Hull)

FIRST DEGREES

(i) FIRST DEGREES IN ARTS

B.A. Special Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 and 2), 3rd Class or without Honours.

Students follow one main subject chosen from among:

Classics; English Language and Literature; French Language and Literature; Geography; German; Greek (with Latin); Mediaeval and Modern History; Latin (with Greek); Music; Philosophy; Philosophical Theology; Psychology; Social Studies; Spanish; Swedish; Theology.

B.A. Joint Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 and 2), 3rd Class or without Honours.

Students follow two main subjects chosen from among:

American Studies; Drama; English; French; Geography; German; Greek; History; Italian; Latin; Law; Music; Philosophy; Political Studies; Psychology; Russian; Sociology; Spanish; Swedish; Theology.

B.A. Pass: 3 years. At the end of their first year candidates for the B.A. Special or Joint Honours degrees may be transferred to a Pass course. Students follow a course comprising subjects chosen from among:

American Studies; Classics; English; French; German; Geography; Greek; Mediaeval and Modern History; Italian; Latin; Law; Pure Mathematics; Applied Mathematics; Music; Philosophy; Political Studies; Psychology; Russian (after 1967); Sociology; Spanish; Swedish; Theology.

LL.B. Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 and 2), 3rd Class and Pass.

B.Sc.(Econ.) Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 and 2), 3rd Class and Pass.

(ii) FIRST DEGREES IN SCIENCE

B.Sc. Special Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 and 2), 3rd Class and Pass.

Students follow one main subject chosen from among:

Applied Physics; Biochemistry; Botany; Chemistry; Geography; Geology; Mathematics; Philosophy; Physics; Psychology; Zoology.

B.Sc. Joint Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 and 2), 3rd Class or Pass.

Students follow two main subjects chosen from among:

Biological Chemistry; Botany; Chemistry; Geography; Geology; Applied Mathematics; Pure Mathematics; Philosophy; Physics; Psychology; Zoology.

B.Sc. Pass: 3 years. At the end of their first year students reading for the B.Sc. Special or B.Sc. Joint Honours degrees may be transferred to a Pass course.

HIGHER DEGREES

(i) MASTERS' AND EQUIVALENT DEGREES

B.D.; M.A.; M.Sc.; LL.M.; M.Sc.(Econ.); M.Ed. All courses last for at least 2 years, of which one must be full-time, or 3 years part-time. Candidates for the degree of B.D. must pass or be exempted from a qualifying examination in seven papers before submitting a thesis. A thesis must be submitted for all masters' degrees, except for the M.A. in Mathematics; a written and oral examination may also be required. The degrees of M.A. and M.Sc. in Mathematics may be taken by thesis or examination.

(ii) DOCTORATES

Ph.D.: by thesis and oral examination; 2 or 3 years according to the candidates' qualifications.

D.Sc.(Econ.); LL.D.; D.Litt.; D.Sc.; D.D.: awarded on published work. Open only to Hull graduates or, in the case of the D.Litt. and D.Sc. degrees, to members of the University staff.

HONORARY DEGREES

Any degree of the University may be awarded as an honorary degree.

DIPLOMAS AWARDED

Advanced Diploma in Education: 1 year for graduates; 1 year full-time or 2 years part-time for non-graduate qualified teachers over 25 with 4 years' approved experience.

Diploma in Public Administration (D.P.A.): 3 years part-time.

Diploma in Specialist Studies (Mathematics): 1 year, for graduate and non-graduate teachers.

Diploma in Comparative Law: 1 year for foreign graduates; thesis and oral examination.

Diploma in Social Studies: 2 years (may be 1 year for graduates).

Diploma in Applied Social Studies: 1 year for graduates or persons with equivalent qualifications.

Diploma in Operational Research for Management: 1 year postgraduate.

CERTIFICATES AWARDED

Graduate Certificate in Education: 1 year for graduates.

Certificate in Divinity: minimum 2 years part-time, for scripture teachers.

Certificate in Local History: for students in adult education classes.

Certificate in Swedish: minimum 2 years part-time.

Health Visitor's Certificate: 1-year course for the Health Visitor's Certificate of the Royal Society for the Promotion of Health.

UNIVERSITY OF KEELE

Keele, Staffordshire
(Abbreviation: Keele)

FIRST DEGREES

B.A. Honours: 4 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 and 2), 3rd Class or Pass.

The first (Foundation) year of the course consists of a compulsory course of lectures for all students on the heritage of civilisation, contemporary problems and the methods and influence of the experimental sciences. During the next three years students must

choose at least four subjects, including at least one from the arts and social sciences and at least one from the sciences. Two of the four must be studied at principal level for three years; subjects taken at subsidiary level are studied for one year.

Courses are available in the following subjects:

Biology; Chemistry; Economics; English; French; Geography; Geology; German; Greek; History; Latin; Law; Mathematics; Philosophy; Physics; Political Institutions; Psychology; Social Studies.

Two **Joint Honours** courses are available in International Relations (History, Economics and Political Institutions) and in Social Analysis (Philosophy, Economics and Political Institutions).

B.A. Honours with Diploma in Education. Students may take during their last three years, concurrently with their degree studies, a course for the Diploma in Education, successful completion of which means that intending teachers need not take a further course of professional training. Candidates read two principal subjects and one subsidiary for their degree, as well as education; they undertake practical training and sit a Diploma examination. The Diploma may be awarded 'with Distinction', 'with Commendation' or 'Pass'.

B.A. Honours with Diploma in Social Studies. Students read Political Institutions and Social Studies as their principal subjects and Psychology and a science as subsidiaries; they undertake practical work and write a thesis.

HIGHER DEGREES

(i) MASTERS' DEGREES

M.A. and M.Sc.: not less than 1 year full-time or 2 years part-time.

Examination courses for the degree of M.A. are available in:

Economics; French; German Mediaeval Studies and Modern Literature.

Examination courses for the degree of M.Sc. are available in:

Geology; Mathematics; Organic Chemistry; Quantum Mechanics; Quantum Theory and the Structure of Matter.

(ii) DOCTORATES

Ph.D.: at least 2 years' full-time or 3 years' part-time research.

D.Litt. and D.Sc.: awarded for published contributions to knowledge.

UNIVERSITY OF KENT AT CANTERBURY

Westgate House, Canterbury, Kent

FIRST DEGREES

(i) FIRST DEGREE IN ARTS

B.A. Honours: 3 or 4 years. All courses lead to the award of a degree with Honours, but students who do not reach the standard for Honours may be awarded a Pass degree. Courses are available in the following subjects:

Humanities

Classical Studies; English Literature; French; German; History; English Literature and Latin; German and English Literature; French and English Literature; English Literature and History; English Literature and Philosophy; Modern Languages; History and Philosophy; Philosophy and French; Philosophy and German.

Social Sciences

Accounting; Economics; Economic History; Political Studies; Sociology; Law; or combinations of these subjects.

(ii) FIRST DEGREE IN SCIENCE

B.Sc. Honours: 3 years. All courses lead to the award of a degree with Honours, but students who do not reach the standard for Honours may be awarded a Pass degree. Courses are available in the following subjects:

Chemical Physics; Chemistry; Physics; Electronics; Mathematics.

HIGHER DEGREES

(i) MASTERS' DEGREES

M.A.; M.Sc.

(ii) DOCTORATE

Ph.D.

UNIVERSITY OF LANCASTER

Bailrigg House, Lancaster

FIRST DEGREE

B.A.: 3 years. This is the first degree in both Arts and Science subjects. All courses lead to the award of a degree with Honours, but students who do not reach the standard for Honours may be awarded a Pass degree. Courses are available in the following subjects:

Biology; Chemistry; Classics; Economics; Economics and Politics; Economics and Operational Research; English; English and French Studies; Environmental Studies; French Studies; Greek and Philosophy; History; History and Politics; Modern History and Economics; Latin and English; Latin and French Studies; Mathematics; Philosophy; Physics; Applied Physics; Theoretical Physics; Politics; Politics, History and Philosophy; Russian Studies.

HIGHER DEGREES

(i) MASTERS' DEGREES

M.A.: at least 1 year full-time, by course and examination.

M.Sc.; M.Litt.: 1 year full-time or 2 years part-time, by course and thesis.

(ii) DOCTORATES

Ph.D.: at least 2 years' full-time or 3 years' part-time study.

D.Sc.; D.Litt.

UNIVERSITY OF LEEDS

Leeds, 2, Yorkshire
(Abbreviation: Leeds)

FIRST DEGREES

(i) FIRST DEGREES IN ARTS

B.A. in General Studies Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Pass.

In their second and third years students follow one of the five groups of subjects listed below:

English, History and one other subject.

English, a language other than English and one other subject.

Geography, History and one other subject.

Two languages other than English and one other subject.

English, Geography and one other subject.

B.A. in Combined Studies Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Pass.

Students may offer any one of the following:

Arts

Arabic and English; Economic History and Geography; Economics and Geography; Economics and History; English and Fine Art; English and Hebrew; English and History; English and Latin; English and Music; English and Spanish; English and Theology; Fine Art and Music; Fine Art and Philosophy; Geography and History; Italian and Music; Latin and Spanish; Mathematics and Philosophy; Music and Theology; Philosophy and English Literature; Philosophy and Subsidiary French; Philosophy and History; Philosophy and Theology; Theology and Hebrew.

Economic and Social Studies

Economics and Politics; Economics and Sociology; Geography and Politics; Geography and Sociology; Philosophy and Politics; Psychology and Sociology; Sociology and Philosophy.

B.A. in Special Studies Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Pass.

Students may offer any one of the following subjects:

Chinese; Classics; Economics; Economics with Statistics; English; Fine Art; French Language and Literature; French and Latin Languages and Literatures; Geography; German Language and Literature; Greek Language and Literature; History; Italian Language and Literature; Latin Language and Literature; Latin with Greek; Mathematics; Music; Philosophy; Political Studies; Russian Language and Literature; Semitic Languages and Literature; Sociology; Spanish Language and Literature;

Textile Design; Textile Management; Theology; Modern Languages and Literature (two from among French, German, Italian, Russian and Spanish).

B.Com. Ordinary or Honours: 3 years. Classification of Award: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Ordinary.

The degree of B.Com. is awarded with Honours or as an Ordinary degree according to the standard reached in the Final examination. It may be taken with Accountancy, Law or an Applied Science subject as the principal subject along with Economics. Supplementary Textile subjects may be combined with a B.Com. course.

LL.B. Ordinary: 3 years.

LL.B. Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class.

B.Ed.: The introduction of the degree of B.Ed. for suitable students at colleges of education associated with the University was approved in December 1965.

(ii) FIRST DEGREES IN SCIENCE AND TECHNOLOGY

B.Sc. Ordinary: 3 years. Students take two subjects in their Final year.

B.Sc. Honours: 4 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Ordinary. Students may take one or two subjects in the Final examination; these subjects are also taken by candidates for Ordinary degrees.

One main subject

Agriculture; Agricultural Botany (Honours only); Agricultural Chemistry (Honours only); Agricultural Economics (Honours only); Anatomy; Applied Mineral Sciences; Bacteriology; Biochemistry; Biophysics; Botany; Ceramics; Chemical Engineering; Chemistry; Civil Engineering; Colour Chemistry or Dyeing; Earth Sciences; Electrical and Electronic Engineering; Food Science; Fuel Engineering; Fuel Science; Geography; Leather Science; Mathematics; Mechanical Engineering; Metallurgy; Mining; Pharmacy; Pharmacology; Physics; Physiology; Psychology; Textile Chemistry; Textile Engineering; Textile Industries; Textile Physics; Zoology; Zoology with Agricultural Zoology.

Two main subjects

Bacteriology and Biochemistry; Bacteriology and Botany; Bacteriology and Chemistry; Bacteriology and Zoology; Biochemistry and Botany; Biochemistry and Zoology; Botany and Chemistry; Botany and Zoology; Chemistry and Geology; Chemistry and Mathematics; Chemistry and the Philosophy and History of Science; Chemistry and Physics; Chemistry and Physiology; Geography and Mathematics; Geology and Physics; Mathematics and the Philosophy and History of Science; Mathematics and Physics; Mathematics and Statistics; Physics and the Philosophy and History of Science; Physics and Statistics; Psychology and Statistics; Psychology and Zoology. (Other combinations may be approved.)

(iii) FIRST DEGREES IN MEDICINE

M.B., Ch.B.: not less than four years, three months. Classification of Award: the degree may be awarded with Honours to candidates who reach an appropriate standard. Honours are classified as 1st and 2nd Class.

B.Ch.D. (Bachelor of Dental Surgery): not less than $4\frac{1}{2}$ years. Classification of Award: the degree may be awarded with Honours to candidates who reach an appropriate standard. Honours are classified as 1st and 2nd Class.

HIGHER DEGREES

(i) MASTERS' AND EQUIVALENT DEGREES

B.D.; B.Mus.; M.A.; LL.M.; M.Com.; M.Ed.; M.Sc. Leeds graduates may take the degrees of B.Mus., M.A., LL.M. and M.Com. in one year, other graduates in two. The degrees of M.Ed. and M.Sc. are awarded after two-year courses, except that Honours B.Sc.'s may take the M.Sc. degree in one. Courses for the M.Sc. are available in the following subjects:

Electronic Computation; Mathematics; Reaction Kinetics and Mechanisms; Geochemistry; Geophysics; Molecular Biology; Physics; Structural Engineering; Bearing Design, Lubrication, Friction and Wear.

(ii) DOCTORATES

Ph.D.: 2 years' research.

Litt.D.; D.Mus.; D.D.; LL.D.; D.Sc.: open to Leeds graduates in the sixth year after graduation.

(iii) HIGHER MEDICAL DEGREES

M.Ch.D.: 1 year after graduation for Leeds graduates, 2 for others.

M.D.: 3 years after graduation.

Ch.M.: 5 years after graduation.

HONORARY DEGREES

Litt.D.; LL.D.; D.Mus.; D.D.; D.Sc.; M.A.; M.Sc.

DIPLOMAS AWARDED

Diploma in Hebrew: 2 years part-time.

Diploma in Spanish: 2 years part-time.

Diploma in Theology: 3 years for students not qualified to take the B.A. in Special Studies in Theology.

Diploma in Agriculture: minimum of 2 years.

Diploma in Dyeing: minimum of 2 years.

Diploma in Leather Manufacture: minimum of 2 years.

Diploma in Mining Engineering: minimum of 2 years.

Diploma in Textile Industries: minimum of 2 years.

Diploma in Dental Surgery (L.D.S.): 4 years; the Diploma may be awarded to candidates for the degree of B.Ch.D. who fail in the Final examination but who have reached a high enough standard in that examination to qualify for the award of the Diploma.

Diploma in Nursing: awarded after 4 years' hospital training and 3 terms' lectures for S.R.N.'s.

Diplomas of the Institute of Education. Diplomas of the Institute of Education are open to college of education lecturers and serving teachers (graduate and non-graduate) with at least 5 years' approved teaching experience. Diplomas are awarded after one-year full-time courses in the following fields:

Primary Education; Secondary Education; the Education of Backward Children; Physical Education; Religious Education; Curricular Studies for Overseas Teachers.

Professional or Professional Graduate Certificate for Overseas Teachers.

Certificate or Graduate Certificate in the teaching of English as a second language.

Postgraduate Diplomas: awarded one year, and sometimes two years, after graduation in the following subjects:

Agricultural Bacteriology; Agricultural Botany (in abeyance); Agricultural Chemistry; Agricultural Economics; Agricultural Zoology; Agriculture (Farm Management); Applied Geophysics; Ceramics; Chemical Engineering; Concrete Technology; Electronic Computing.

English Studies; English as a second language; Folk Life Studies.

Food Science; Fuel Engineering; Fuel Science; History and Philosophy of Science; Leather Manufacture; Leather Science; Metallurgy; Mineral Dressing and Coal Preparation; Plant Pathology; Textile Industries.

Development Administration; Health Service Administration; Industrial Management; Social Studies.

Diploma in Public Health (D.P.H.): 18 months part-time.

Diploma in Psychological Medicine (D.P.M.): 2 years part-time.

Semitic Studies: at least 1 year full-time.

CERTIFICATES AWARDED

Graduate Certificate in Education: 1 year for graduates intending to become teachers.

Graduate Certificate in Educational Studies: 1 year for experienced teachers.

Nurse Teacher's Certificate: 1 year for S.R.N.'s with 3 years' experience and 1 year's experience as a Ward Sister.

Health Visitor's Certificate of the Royal Society of Health: 1 year for S.R.N.'s who have passed Part I of the Central Midwives Board examination.

Certificate in Psychiatric Social Work: 1 year for graduates in sociology, psychology or social studies or for diplomates in those subjects or for persons with approved educational qualifications.

Certificate in Arabic: 2 years part-time.

Certificate in Russian: at least 2 years part-time.

Certificate in the Teaching of Hebrew: 1 year for holders of the Diploma in Hebrew or an equivalent qualification.

Note. The University also offers extension certificates in a number of subjects, the courses for which are spread over not less than three years. The certificates awarded are the Extension Certificate and the Extension Advanced Certificate. Courses are arranged by the Department of Adult Education and Extramural Studies.

UNIVERSITY OF LEICESTER

University Road, Leicester
(Abbreviation: Leic.)

FIRST DEGREES

(i) FIRST DEGREES IN ARTS AND SOCIAL SCIENCES

B.A. Single-Subject Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Pass.

Students follow a course, together with (except with Classics) one or two supplementary subjects, in one from among:

Classics; Latin; Greek; English; French; German; History; Geography; Mathematics; Psychology.

B.A. Combined Studies Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Pass.

Students take a combination of subjects chosen from among the following:

English; Latin; French; Greek; German; History; Geography; Music; Philosophy; Psychology; Russian; British Archaeology; Economics; Economic History; Sociology; Politics; Pure Mathematics; History of Science; Geology; Botany; Zoology; Ancient History; Ancient Philosophy.

(The University has recently decided to start a three-year course in British Archaeology for the B.A. degree in Combined Studies.)

B.A. Honours in Social Sciences: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Pass.

Students take a common course in their first year and then specialise in one of the following:

Economics; Economic History; Geography; Politics; Sociology.

B.A. Joint Honours in Social Sciences: 3 years (new courses agreed upon in 1966). Courses in Economics and Economic History and in Geography, Economics and Economic History.

B.Sc. Honours in Social Sciences: 3 years (new course agreed upon in 1966). A course is offered in Economics.

LL.B. Honours: 3 years. (Regulations for this degree had not been announced at the time of writing.)

(ii) FIRST DEGREES IN SCIENCE

B.Sc. Single-Subject Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Pass.

Students take one subject, together with one or two supplementary subjects, chosen from among:

Chemistry; Physics; Botany; Cell Biology; Zoology;
Mathematics; Geography; Geology; Biochemistry;
Engineering.

B.Sc. Combined Studies Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Pass.

Students take a combination of subjects chosen from among the following:

Botany; Chemistry; Physics; Zoology; Geology; Geography;
Pure Mathematics; Applied Mathematics; Mathematical
Statistics; Psychology; Biochemistry; English; Economics;
Politics; Sociology; Logic and Scientific Method; British
Archaeology; French; German; History; Economic
History; History of Science; Philosophy; Ancient Phil-
osophy; Music.

HIGHER DEGREES

(i) MASTERS' DEGREES

M.A.; M.Sc.; M.Ed.: awarded after at least 1 year's full-time or 2 years' part-time study. The M.Sc. degree may also be awarded after 1-year courses in Applied Mathematics and Experimental Space Physics and the M.A. degree after a 1-year course in English Local History.

(ii) DOCTORATES

Ph.D.: awarded after at least 2 years' full-time or 3 years' part-time research.

D.Litt.; D.Sc.: awarded on presentation of published contributions to knowledge.

HONORARY DEGREES

D.Litt.; D.Sc.; LL.D.; D.Mus.

DIPLOMAS AND CERTIFICATES AWARDED

Graduate Certificate in Education: 1 year for graduates intending to become teachers.

Diploma in the Sociology and Psychology of Education: 1 year for experienced teachers.

Certificate in Applied Social Studies: 1-year post-credentialed course.

Certificate in Museum Studies: 1 year full-time (starting October 1966).

UNIVERSITY OF LIVERPOOL

Liverpool, 3, Lancashire
(Abbreviation: Liv.)

FIRST DEGREES

(i) FIRST DEGREES IN ARTS

B.A. Honours: 3 or 4 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Pass.

The following courses are available:

Single Honours

Celtic (Welsh); Classics; Economics; English Language and Literature; French; Geography; German; Greek; Hispanic Studies; History; Italian; Latin; Music; Oriental Studies (Egyptian or Hebrew); Philosophy; Political Theory and Institutions; Psychology; Pure Mathematics; Russian; Social Science; Social Studies.

Joint Honours

Certain combinations of Celtic Studies; English Literature; French; Geography; German; Hispanic Studies; History; Italian; Latin; Mathematics; Philosophy; Politics; Psychology; Russian.

B.A. General Studies Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Pass.

Students take two subjects for finals, at least one of which has been studied throughout the course.

B.Arch. Honours: 5 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2) or Ordinary.

B.Com. Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2) or Ordinary.

Alternative courses are offered for the ordinary student in commerce and students wishing to become accountants.

B.Mus.: 1 year. The course for the B.Mus. may be taken by students who have obtained a good Honours B.A. degree in Music and is in the form of a fourth year of specialist study.

LL.B. Honours: 3 years. Classification of Honours: 1st Class (which may be divided into two Divisions), 2nd Class (Divs 1 or 2), 3rd Class (which may be divided into two Divisions) or Ordinary.

B.Ed.: the University has agreed that selected students in constituent colleges in the Institute of Education may take a four-year course leading to the award of the new degree of B.Ed.

(ii) FIRST DEGREES IN SCIENCE AND TECHNOLOGY

B.Sc. Ordinary: 3 years. Classification of Award: the degree may be awarded with a mark of distinction.

Students take three or four subjects.

B.Sc. General Honours: 4 years. Classification of Honours: 1st Class, 2nd Class or 3rd Class (each Class may be divided into two Divisions) or Ordinary.

Students take three or four subjects.

B.Sc. Honours: 4 years. Classification of Honours: 1st Class, 2nd Class or 3rd Class (each Class may be subdivided into two Divisions) or Ordinary.

Courses are available in the following subjects:

Anatomy; Bacteriology; Biochemistry; Botany; Chemistry;
Genetics; Geography; Geology; Mathematical Physics;
Mathematical Statistics; Mathematics; Metallurgy;
Oceanography; Pharmacology; Physics; Physiology;
Psychology; Zoology.

B.Eng. Ordinary: 4 years.

Courses are available in the following subjects:

Building Science; Civil Engineering; Electrical Engineering;
Electronics; Mechanical Engineering; Metallurgy.

B.Eng. Honours: 4 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Pass.

Courses are available in the following subjects:

Building Science; Civil Engineering; Electrical Engineering and Electronics; Fluid Mechanics; Mechanical Engineering; Metallurgy.

(iii) FIRST DEGREES IN MEDICINE

M.B., Ch.B.: 5 or 6 years. Classification of Award: the degree may be awarded with 1st and 2nd Class Honours.

B.D.S.: $4\frac{1}{2}$ or $5\frac{1}{2}$ years. Classification of Award: the degree may be awarded with 1st or 2nd Class Honours.

B.V.Sc. (Bachelor of Veterinary Science): 5 years. Classification of Award: the degree may be awarded with 1st or 2nd Class Honours.

HIGHER DEGREES

(i) MASTERS' DEGREES

M.A.: higher study or research: graduates 2 years; non-graduates (under certain conditions) 3 years; by thesis, oral examination and written examination if required.

M.C.D. (Master of Civic Design): for B.Arch.'s at least 1 year's study; otherwise a 2-year course; by studio work, field studies and examination.

M.Arch. (Master of Architecture): 1 year's higher study or research for Honours graduates in Architecture; non-Honours graduates, 2 years' higher study or research; suitably qualified non-graduates may be admitted to the course 3 years after gaining a professional qualification; by thesis, oral and written examination, if required.

M.Com.: 2 years' higher study or research after B.Com. or B.Com.Sc. of the University; thesis with or without examination; other graduates eligible under certain conditions.

M.Ed.: approved course of study of at least 2 years for graduates holding a Diploma in Education or its equivalent; non-graduates, under certain conditions, 3 years; thesis, oral and written examination.

LL.M.: at least 2 years' systematic work after LL.B. Honours (not lower than 2nd Class (Div. 1) or equivalent); thesis.

M.Sc.: by thesis and, if required, examination. For Liverpool Hons. B.Sc.'s 1 year's higher study or research. For other graduates, a prescribed preparatory course and examination, after which 1 year's higher study or research. Other candidates may, in special circumstances, be accepted under certain conditions. Courses are available in:

Numerical Analysis and Electronic Computation: 1 year, for Hons. Mathematics graduates and, exceptionally, Physics, Engineering or another subject.

Acoustics: 1 year, for Hons. graduates in Physics, Chemistry, Electrical or Mechanical Engineering, or the equivalent.

M.Eng.: higher study or research, by thesis and, if required, examination. For Hons. B.Eng.'s 1 year full-time or 2 years part-time; for non-Hons. B.Eng.'s 3 years part-time; for other graduates 2 years; for approved non-graduates 3 years.

(ii) DOCTORATES

Ph.D.: for graduates not less than 2 years' full-time research; for non-graduates, under certain conditions, 3 years. By thesis and oral examination.

Litt.D.: awarded to Liverpool M.A.'s after 7 years from graduating as B.A.; for published contributions to learning.

LL.D.: awarded to Liverpool graduates of not less than 7 years' standing for published contributions to learning.

D.Sc.: awarded to Liverpool graduates of not less than 6 years' standing for published contributions to science.

D.Eng.: awarded to M.Eng.'s or Ph.D.'s (Faculty of Engineering) for published contributions to the science of engineering.

(iii) HIGHER MEDICAL DEGREES

M.D.: by thesis 2 years after M.B., Ch.B., with, if the candidate wishes, copies of published papers on medical science; oral examination on subject of thesis. Or 5 years after M.B., Ch.B., by examination in general medicine and a selected branch of medicine.

Ch.M.: by thesis and examination. Open to graduate Fellows of the Royal College of Surgeons and to non-medical graduates who hold a medical qualification registrable in Great Britain.

M.Ch.Orth. (Master of Orthopaedic Surgery): by thesis and examination after a course of not less than 1 year; open to medical

graduates and to non-medical graduates who are Fellows of the Royal Colleges of Surgeons of England, Edinburgh, Ireland, Australia or Canada or Fellows of the American College of Surgeons or surgeon Fellows of the Royal Faculty of Physicians and Surgeons, Glasgow.

M.Ch.Otol. (Master of Oto-Rhino-Laryngological Surgery): open to medical graduates, to non-medical graduates who hold a medical qualification registrable in Great Britain or, in special circumstances and under certain conditions, to persons holding a registrable medical qualification. By thesis for Fellows of one of the Royal Colleges of Surgeons, or by examination for holders of D.L.O. of the Royal College of Surgeons of England; 5 years after registrable qualification and 2 years' work and attendance at approved courses.

M.Rad. (Master of Radiology): in either radio-diagnosis or radiotherapy; open to holders of the Diploma in Radiology of the University of 2 years' standing; by thesis.

M.D.S.: for B.D.S. graduates of 2 years' standing and for equivalents 3 years. 6-month course; thesis and examinations; copies of published work on dental science may be presented if the candidate wishes.

M.V.Sc.: 2 years' higher study after B.V.Sc. or equivalent; by thesis or report and examination if required.

D.V.Sc: for Liverpool veterinary graduates of 8 years' standing for published contributions to veterinary science.

HONORARY DEGREES

Doctors' and masters' degrees may be conferred as honorary degrees.

DIPLOMAS AWARDED

Diploma in Archaeology: 1 or 2 years for graduates, by thesis and examination.

Diploma in Civic Design: 1 or 2 years' postgraduate or post-qualification prescribed study; by thesis and examination.

Diploma in Education: 1 year full-time or 5 terms part-time and 1 term full-time for candidates with approved initial qualifications in education and appropriate teaching experience; by thesis and examination.

Diploma in International Law: 1 year for graduates or other suitably qualified candidates; by thesis and examination.

Diploma in Public Administration (Dipl.P.A.): 1 year.

Diploma in Applied Social Studies: 1 or 2 years, according to experience, for graduates or holders of a diploma or certificate in social studies or persons with other academic qualifications or relevant experience.

Diploma in the Teaching of Handicapped Children: 1 year for qualified teachers, with at least 3 years' teaching experience, of which not less than 2 years must have been spent in schools other than special schools.

Diploma in the Study of Records and Administration of Archives: 1 year full-time, 2 years part-time.

Diploma in Industrial Administration: 1 or 2 years for suitably qualified candidates.

Diploma in Applied Psychology: 1 year.

Diploma in Engineering (Dipl.Eng.): 2 years' practice of engineering after final examination for Certificate in Engineering (including 1 year's approved study or dissertation).

Postgraduate Diploma in Building Science: not less than 3 terms for graduates or holders of an approved professional qualification.

Diploma in Traffic Studies: not less than 3 terms for graduates or holders of an approved professional qualification.

POSTGRADUATE MEDICAL DIPLOMAS

Diploma in Public Health (D.P.H.): 1 year.

Diploma in Medical Radiology (Diagnosis) or (Therapy) (D.M.R.(D.) or (T.): 2 years.

Diploma in Tropical Medicine and Hygiene (D.T.M. & H.): 3 months.

Diploma in Veterinary Hygiene (D.V.H.): 1 year.

CERTIFICATES AWARDED

Certificate in Archaeology: 1 year for candidates aged not less than 19.

Certificates in Separate Arts Subjects: not less than 2 years for undergraduate degree students.

Certificate in Social Science: 1 or 2 years.

Certificate in Education: 1 year for graduates intending to become teachers.

Certificate in Engineering: 4 years for candidates who have not satisfied the requirements for admission to a degree course nor obtained exemption.

UNIVERSITY OF LONDON

London, W.C.1
(Abbreviation: Lond.)

FIRST DEGREES

(i) FIRST DEGREES IN ARTS

B.A. General: 3 years. Classification of Award: Divisions I, II or III.

Students must follow three subjects.

B.A. Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class.

Candidates for B.A. Honours in certain subjects must also take a subsidiary subject. Courses are available in the following Special subjects ('Int.' means that the course may be taken by internal students only):

African Studies (Int.); Anthropology (Int.); Arabic; Bengali (Int.); Burmese (Int.); Central European Regional Studies; Chinese; Chinese (Classical and Modern) (both discontinued 1965); Classics; Czech and Slovak (Language and Literature); Dutch; English; French; Geography; German; Greek; Gujarati (Int.); Hausa; Hebrew; Hebrew and Arabic; Hebrew and Assyrian (Int.); Hebrew and Egyptian (Int.); Hindi (Int.); History; History of European Art; Hungarian (Language and Literature); Italian; Japanese; Japanese (discontinued 1966) (Classical and Modern); Latin; Malay; Marathi (Int.); Mathematics; Pali (with Sanskrit); Persian; Philosophy; Philosophy and Economics (Int.); Philosophy and Greek (Int.); Philosophy and Psychology (Int.); Polish (Language and

Literature); Portuguese; Psychology; Rumanian (Language and Literature); Russian (Language and Literature); Russian (Regional Studies); Sanskrit; Scandinavian Languages; S.E. European Regional Studies; Serbo-Croat (Language and Literature); Sinhalese (Int.); Sociology; Spanish; Tamil (Int.); Turkish; Urdu (Int.).

Courses are offered in the following Colleges and Institutions with Recognised Teachers:

Courtauld Institute of Art; School of Slavonic and East European Studies; Bedford College; Birkbeck College (for part-time and some postgraduate students); King's College; London School of Economics (Anthropology, History, Geography, Philosophy and Economics, and Sociology only); Queen Mary College; Royal Holloway College; School of Oriental and African Studies; University College; Westfield College; Jews' College; Sir John Cass College (Geography and Mathematics).

B.A. Honours in Architecture: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class.

The course is offered at University College and leads on to a two-year course for the degree of M.A.

B.Sc.(Econ.) Honours: normally 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Pass.

Courses are provided at the London School of Economics and Political Science, Queen Mary College and University College and are offered in the following subjects:

London School of Economics

Economics, Analytical and Descriptive; Economics and Econometrics; Monetary Economics; Industry and Trade; Accounting; Modern Economic History; Mediaeval Economic History; Government; Sociology; Statistics; Computation Methods; International Relations; Social Anthropology; International History; Geography; Philosophy.

Queen Mary College

Economics.

University College

Economics; Economic History with Economics; Geography with Economics; International Relations with Economics; Social Anthropology with Economics; Statistics with Economics.

B.Sc.(Soc.) Honours in Sociology: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class. Courses are provided at Bedford College and the London School of Economics and Political Science.

B.Sc.(Est.Man.) (Bachelor of Science in Estate Management): 3 years. Classification of Award: Divisions I, II and III. A course is provided for internal students at the College of Estate Management.

B.Mus. Honours: 3 years. Classification of Award: 1st Class Honours, 2nd Class Honours or Pass. A course is provided at King's College and at the following Institutions with Recognised Teachers:

Battersea College of Technology (Ordinary degree only);
Royal Academy of Music; Royal College of Music;
Trinity College of Music.

LL.B. Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class. Courses are provided at King's College, the London School of Economics and Political Science, Queen Mary College, the School

Sir John Cass College

Jewry Street, London, E.C.3. Royal 8321

UNIVERSITY OF LONDON

INTERNAL DEGREE COURSES in

Botany · Chemistry · Geography
Geology · Mathematics · Metallurgy
Physics · Psychology · Zoology

Internal registration gives students full membership of the University of London Students' Union, and full use of social and sports facilities of both college and university.

The College is not participating in the University Central Admission Scheme.

Students should apply direct to the college secretary for details of courses, application forms and the college prospectus.

of Oriental and African Studies (students must register at another college) and University College.

B.D. Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Pass.

Courses are provided at King's College Theological Department (Church of England) (B.D. and A.K.C.—Associateship of King's College), New College, London (Congregational), and Richmond College, Richmond, Surrey (Methodist).

(ii) FIRST DEGREES IN SCIENCE AND TECHNOLOGY

Courses are provided in the following Colleges, Schools and Institutions with Recognised Teachers:

Bedford College; Birkbeck College (for part-time students and some full-time postgraduate students); Imperial College of Science and Technology; King's College; Queen Elizabeth College; Queen Mary College; Royal Holloway College; University College; Westfield College; London School of Hygiene and Tropical Medicine; Northern Polytechnic; Sir John Cass College; West Ham College of Technology; Woolwich Polytechnic.

Agriculture and Horticulture

Wye College

Household Science and Nutrition

Queen Elizabeth College

Architecture

University College

B.Sc. General: 3 years. Classification of Award: 1st Class Honours, 2nd Class Honours (Divs 1 or 2) or Pass.

For the Final Examination, students take two subjects selected from among:

Biochemistry; Botany; Chemistry; Geology; Physics; Physiology; Zoology; Astronomy; Geography; Mathematics (Pure and Applied); Psychology; Pure Mathematics with Statistics.

B.Sc. Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class (or Pass in some subjects).

For the Final Examination, students take one principal subject and one or more ancillary subjects. Courses are available in the following subjects:

Anatomy; Anthropology; Astronomy; Biochemistry; Botany;

Chemistry; Geography; Geology; Mathematics; Microbiology; Physics; Physiology; Psychology; Statistics; Zoology.

B.Sc.(Agric.): 3 years. Classification of Award: Divisions I, II or III.

Students take the First Examination in four subjects and the Final Examination in Crop Botany, Agricultural Chemistry and Soil Science, Animal Physiology and Animal Hygiene, Animal Husbandry and Animal Organisation. The course is provided at Wye College.

B.Sc.(Agric.) Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class.

Students take Part I in Physical Sciences and Biology, Part II in Economics and Part III in Crop Production, Animal Production and Rural Economy. The course is provided at Wye College.

B.Sc.(Hort.): 3 years. Classification of Award: Divisions I, II and III.

Students take the First Examination in four subjects and the Final Examination in the Principles and Practice of Horticulture. The course is provided at Wye College.

B.Sc.(Agric.Sc.) Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class.

Students take Part I in Physical Sciences and Biology, Part II in the Design and Analysis of Experiments and Part III in Agricultural Biochemistry and either the Biology of Crop Plants or the Biology of Farm Animals or Soil Science. The course is provided at Wye College.

B.Sc.(Nutrition) Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Pass.

Students take Part I in Biology and Physics, Part II in Chemistry and Part III in Nutrition and Physiology. The course is provided at Queen Elizabeth College.

B.Sc.(Household Science) Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Pass.

The course is the same as that for B.Sc.(Nutrition), except that Part II includes Physiology and Part III consists of Household Science and either Chemistry or Physiology. The course is provided at Queen Elizabeth College.

B.Sc. Special Honours in Architecture: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class.

The course is provided at University College and leads on to a two-year course for the degree of M.Sc.

B.Sc.(Eng.) Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2) or Pass.

Courses are available in the following subjects:

Aeronautical Engineering; Civil Engineering; Electrical Engineering; Mechanical Engineering.

B.Sc.(Eng.) in Chemical Engineering: 3 years. Classification of Award: 1st Class, 2nd Class (Divs 1 or 2) or Pass.

B.Sc.(Eng.) in Metallurgy: 3 years. Classification of Award: 1st Class Honours, 2nd Class Honours (Divs 1 or 2) or 3rd Class Honours.

B.Sc.(Eng.) in Mining: 3 years. Classification of Award: 1st Class Honours, 2nd Class Honours (Divs 1 or 2) or 3rd Class Honours.

Courses in Engineering are provided at the following Schools of the University and Institutions with Recognised Teachers:

King's College

Civil Engineering; Electrical Engineering; Mechanical Engineering.

Imperial College of Science and Technology

B.Sc.(Eng.) and A.R.S.M. (Associateship of the Royal School of Mines) — Metallurgy, Mineral Technology and Mining; **B.Sc.(Eng.) and A.C.G.I.** (Associateship of the City and Guilds of London Institute) — Engineering, Aeronautical Engineering, Chemical Engineering, Civil Engineering, Electrical Engineering, Mechanical Engineering.

Queen Mary College

Aeronautical Engineering; Civil Engineering; Electrical Engineering; Mechanical Engineering; Nuclear Engineering.

University College

Chemical Engineering; Civil Engineering; Electrical Engineering; Mechanical Engineering.

Sir John Cass College

Metallurgy.

West Ham College of Technology

Chemical Engineering; Civil Engineering; Electrical Engineering; Mechanical Engineering.

Woolwich Polytechnic

Civil Engineering; Electrical Engineering; Mechanical Engineering.

(iii) FIRST DEGREES IN MEDICINE

M.B., B.S.: $5\frac{1}{2}$ years. Classification of Award: the degree may be awarded with Honours.

Courses for the degrees of M.B., B.S. are available at the following schools of the University:

Charing Cross Hospital Medical School; Guy's Hospital Medical School; King's College Hospital Medical School; London Hospital Medical School; Middlesex Hospital Medical School; Royal Free Hospital School of Medicine; St. Bartholomew's Hospital Medical School; St. George's Hospital Medical School; St. Mary's Hospital Medical School; St. Thomas's Hospital Medical School; University College Hospital Medical School; Westminster Medical School.

The first examination for medical degrees (in Chemistry, Physics and Biology) is taken after one year. G.C.E. 'A' level or its equivalent may exempt the candidate from all or part of the first M.B. examination. The second examination (in Human Anatomy, Physiology and Pharmacology) is usually taken five terms after passing the first. The course for the third (final) examination lasts three years and is divided as follows:

Part I: Pathology.

Part II: Medicine, Applied Pharmacology and Therapeutics.

Part III: Surgery.

Part IV: Obstetrics and Gynaecology.

Part I may normally be taken after a 30 months' course (24 months in exceptional cases) but after completing the full 36 months' clinical course a candidate must enter for all the parts of the examination which he has not already passed.

The University accepts certificates for the complete course of medical education, including clinical medicine and surgery, from the following universities outside the United Kingdom:

Dalhousie, McGill, Toronto (Canada); Adelaide (with infirmary), Melbourne (with Melbourne and Alfred Hospitals), Sydney (with infirmary and Prince Alfred hospital) (Australia); Ceylon; Malta; Grant (Bombay), Seth Gordhandas Sunderdas (Bombay), Bengal (Calcutta), Lahore University Medical College, Lucknow University, Madras University Medical College (India).

B.D.S.: 5½ years. Classification of Award: the degree may be awarded with Honours.

Courses are available at the following schools:

Guy's Hospital Medical School; King's College Hospital Medical School; London Hospital Medical School; Royal Dental Hospital of London School of Dental Surgery; University College Hospital Medical School.

The first examination, taken after one year, is as the first M.B. The second examination in Dental Surgery (General Anatomy, Physiology and Special Anatomy) is taken one year after passing the first M.B. The third examination in Dental Surgery consists of:

- Part I: Prosthetic Dentistry, one year after passing the second B.D.S.
- Part II: Medical Surgery, Pathology and Bacteriology, Pharmacology and Therapeutics, 23 months after passing the second B.D.S.
- Part III: Dental Surgery, including Special Pathology and Orthodontics, 3 years and 4 months after passing second B.D.S.

B.Pharm. Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2) or Pass.

Courses are offered at the School of Pharmacy. The final examination is in two parts. Part I is taken at the end of the second year course and includes Pharmaceutics, Pharmacy, Chemistry, Pharmacognosy and Pharmacology. Part II is taken at the end of the third year course and consists of any two of the following subjects:

Pharmaceutical Chemistry; Pharmacognosy; Pharmacology; Pharmaceutics; Pharmaceutical Engineering Science.

B.Vet.Med. (internal students only): 4 years, 2 terms. Classification of Award: Honours or Pass.

Courses are available at the Royal Veterinary College. The first examination (in Veterinary Anatomy, Veterinary Physiology, Biochemistry, Pharmacology and Animal Husbandry) is taken after two years. The second examination (in Veterinary Pathology,

Veterinary Hygiene and Animal Husbandry) is taken after a further five terms. The third examination (in Veterinary Medicine) and the fourth examination (in Veterinary Surgery) are taken not less than eight terms after passing the first examination.

HIGHER DEGREES (LISTED BY FACULTY)

Note. External students: students who wish to take externally the higher degrees of M.Th.; M.A.; LL.M.; M.Pharm.; M.Sc. (in the Faculties of Science, Engineering, and Economics); M.D.; M.S.; M.D.S.; and/or Ph.D. (in all Faculties) must usually have an appropriate bachelor's degree of the University of London.

The degrees of D.D.; D.Lit.; LL.D.; D.Mus.; and D.Sc. (in the Faculties of Science, Engineering and Economics) are not differentiated between internal and external candidates, but all candidates for these degrees are required to possess at least one London degree in the appropriate Faculty.

(i) HIGHER DEGREES IN ARTS

M.A.: examination may be by written papers and/or by thesis and oral examination.

Ph.D.: examination by thesis and oral (examiners may call for written and/or practical papers).

D.Lit.: conferred for original published work; candidates must have the B.A. or M.A. or Ph.D. in the Faculty of Arts. (London graduates only.)

(ii) HIGHER DEGREES IN EDUCATION

M.A.; Ph.D.: *see (i) above.*

(iii) HIGHER DEGREES IN THEOLOGY

M.Th.: open to London B.D.'s with first or second class (Division 1) Honours or to London B.D.'s with Honours obtained in or before 1964. London graduates with other degrees will be required to pass a qualifying examination. Non-London graduates must have equivalent qualifications or pass a qualifying examination. Candidates are examined in any one of six branches.

D.D.: candidates must have London B.D. (Hons.) or M.Th. or Ph.D. and must submit published work.

(iv) HIGHER DEGREES IN LAW

LL.M.: usually no candidate is admitted until two years after passing the LL.B. or the Academic Postgraduate Diploma in Law or the equivalent. Candidates are examined in four papers chosen from a list of 26; or they may in special cases submit a dissertation and be examined in two papers.

LL.D.: candidates must hold the LL.B. or LL.M. or the Ph.D. in the Faculty of Law and must submit published work.

(v) HIGHER DEGREES IN MUSIC

D.Mus.: candidates must have the London B.Mus., obtained usually not less than three years previously.

(vi) HIGHER DEGREES IN SCIENCE

M.Sc.: the degree is awarded in the following areas of study and also in Architecture:

Agriculture; Anatomy; Anthropology; Astronomy; Biochemistry; Biophysics; Botany; Chemical Engineering; Chemistry; Crystallography; Genetics; Geography; Geology; Geophysics; History and Philosophy of Science; Horticulture; Mathematics; Microbiology; Nutrition; Pharmacology; Physics; Physiology; Psychology; Radiation Biology and Radiation Physics; Statistics; and Zoology.

The degree is obtainable by written examination, dissertation, practical and oral, or by some of these methods or by thesis and oral.

Ph.D.: by thesis and oral (examiners may also require written and/or practical).

Admission to the degrees of M.Sc. and Ph.D. is restricted to graduates or in certain cases to persons with other approved qualifications.

D.Sc.: candidates must already have a London degree in science (or in certain cases in arts, medicine or engineering) and must submit original published work.

(vii) HIGHER DEGREES IN ENGINEERING

Admission to the M.Sc.(Eng.) and Ph.D. degrees is restricted to graduates or in certain cases to persons with other approved qualifications.

M.Sc.(Eng.): by thesis or dissertation or by written papers and a report; there is an oral examination. The examiners may require a written examination in addition to a thesis or dissertation.

Ph.D.: by thesis and oral; the examiners may also require written and/or practical examinations.

D.Sc.(Eng.): candidates must have the London B.Sc.(Eng.), M.Sc.(Eng.) or the Ph.D. in the Faculty of Engineering. The degree is awarded only for published work of a high standard such as would give the author an authoritative status in his particular field of research.

(viii) HIGHER DEGREES IN ECONOMICS

Candidates may normally be admitted to masters' degree two years after passing the appropriate first degree. Candidates who have the B.Sc.(Econ.) with first or second class Honours (Division I) as internal students may be admitted after one year.

M.Sc.(Econ.): four written papers and oral, at the discretion of the examiners. Candidates are examined in one subject to be selected from a long list (four papers or a dissertation and two papers).

M.Sc.(Est.Man.): two papers on a selected, approved general subject and a dissertation on an approved special subject.

Ph.D.

D.Sc.(Econ.): candidates must hold a London first or second degree in the Faculty of Economics or the Ph.D. and must submit published work.

(ix) HIGHER DEGREE IN PHARMACY

M.Pharm.: candidates must normally have the London B.Pharm. (revised regulations) and follow a course of not less than two years (one year for candidates who obtained Honours in the B.Pharm. examination as internal students and offer for M.Pharm. either of the subjects taken at Part II). The degree of M.Pharm. is awarded in the following subjects: Pharmaceutical Chemistry; Pharmaceutics; Pharmacology; Pharmacognosy; or Pharmaceutical Engineering Science.

(x) HIGHER DEGREES IN VETERINARY MEDICINE

M.Vet.Med.: candidates must have the London B.Vet.Med. or the B.Vet.Sci. or some other suitable London degree. Other

graduates may be required to pass a qualifying examination. All candidates must hold a qualification which entitles them to registration as veterinary surgeons by the Royal College of Veterinary Surgeons. The degree may be obtained by thesis or examination.

M.Sc. and Ph.D.: *see (vi) above.*

(xi) HIGHER DEGREES IN MEDICINE

M.S.: by thesis to be submitted not less than five calendar years after candidates have obtained the M.B., B.S. degrees of London.

Ph.D.; M.D.: by thesis to be submitted not less than seven years after obtaining full registration with the General Medical Council (four years in certain exceptional cases). Candidates must hold the London M.B., B.S. degrees.

(xii) HIGHER DEGREE IN DENTAL SURGERY

M.D.S.: open only to candidates who have the London B.D.S. as internal students. The examination is in two parts, of which Part I may be taken not less than two calendar years and Part II not less than five calendar years after obtaining the B.D.S. Part I consists of two written papers in Dental Surgery and Pathology, and clinical, oral and practical examinations. Part II calls for the submission of a thesis. Candidates may also be examined orally.

HONORARY DEGREES

LL.M.; M.A.; D.Sc.(Econ.); D.Sc.(Eng.); D.Sc.; D.Mus.; LL.D.; D.Lit.; D.D.

DIPLOMAS AWARDED (LISTED BY FACULTY)

(i) DIPLOMAS IN ARTS (INTERNAL)

Academic Diploma in Education (1 year); Geography (2 years); History of European Art (2 years postgraduate); Town Planning (1 year part-time).

Academic Postgraduate Diploma in Anthropology; Archaeology; Comparative Philology; General Linguistics; Phonetics; Psychology (1 year full-time, 2 years part-time); Archive Administration (1 year full-time, 2 to 5 years part-time); Librarianship (1 year full-time, 2 to 5 years part-time).

Postgraduate Certificate in Education (1 year).

Diploma in Fine Arts (4 years).

(ii) DIPLOMAS IN ARTS (EXTERNAL)

Diploma in Geography.**Diploma in Education.****Postgraduate Certificate in Education.**

(iii) DIPLOMAS OFFERED BY THE DEPARTMENT OF EXTRAMURAL STUDIES

Diploma in the Humanities: a course is offered in the following subjects:

History; Literature; Economics; Sociology; History of Art; Biblical and Religious Studies; International Affairs; Visual Arts; Archaeology; and History of Music.

The courses normally last four years, each of which ends in an examination.

The Department also offers a three-year course for the **Certificate in Transport Studies**.

The Department of Extramural Studies administers the following Diplomas and Certificates which are generally vocational in character:

Diploma in Dramatic Art; Nursing; Theology.

Sister-Tutor's Diploma.

Certificate of Proficiency in Diction and Drama; English for Foreign Students; Modern Foreign Languages; Natural History; Religious Knowledge.

(iv) DIPLOMA IN THEOLOGY

Academic Diploma in Theology: 2 years, internal and external students.

(v) DIPLOMA IN LAW

Academic Postgraduate Diploma in Law: not less than 1 year.

(vi) DIPLOMAS IN SCIENCE

Academic Postgraduate Diploma in Bacteriology: 1 year.

Academic Postgraduate Diploma in Dietetics: about 1 year.

Academic Diploma in General Biochemistry: 1 year full-time, 2 years part-time.

Academic Diploma in Geography: 2 years.

Academic Postgraduate Diploma in Home Economics, related to community development.

Academic Postgraduate Diploma in Mathematics: 1 year full-time, 2 years part-time.

Academic Postgraduate Diploma in Numerical Analysis: 1 year full-time, 2 years part-time.

Academic Postgraduate Diploma in Nutrition: 1 year full-time.

Academic Postgraduate Diploma in Psychology: 1 year full-time, 2 years part-time.

Academic Postgraduate Diploma in Statistics: 1 year full-time.

External Diploma in Geography: 1 to 2 years.

(vii) DIPLOMAS IN ECONOMICS

Postgraduate Diploma in Public Administration: normally 2 years.

Diploma in Social Studies: external; normally 2 years.

Postgraduate Diploma in Farm Business Administration: 1 year.

(viii) DIPLOMAS IN EDUCATION

Diplomas and Certificates are conferred by the Institute of Education, which was founded by the London County Council in 1902 as the London Day Training College and was transferred to the University under its present title in 1932. The Institute consists of King's College Department of Education and Goldsmiths' College Training Department and School of Art (a college of education) and of 33 colleges in the London area training organisation.

Postgraduate Certificate in Education: 1 year for graduates intending to become teachers.

Art Teacher's Certificate: 1 year.

Music Teacher's Certificate: 1 year.

Academic Diploma in Education: for experienced qualified teachers; 1 year.

Associateship of the Institute: for experienced qualified teachers carrying out special investigations; 1 year.

Diploma in the Teaching of English as a foreign language: 1 year.

Diploma in Child Development: for experienced teachers of younger children; 1 year.

Diploma in the Education of Handicapped Children: for experienced teachers; 1 year.

Diploma in the Education of Maladjusted Children: for experienced teachers; 1 year.

Diploma in the Content and Methods of Health Education: 1 year.

Diploma in Religious Education: 1 year.

Diploma in the Teaching of Educationally Subnormal Children: for experienced teachers; 1 year.

Diploma in the Theory and Practice of Audio-Visual Aids: 1 year.

Diploma in Community Development.

The constituent Departments and Colleges of Education provide the following courses leading to Institute awards:

Postgraduate Certificate in Education: King's College, Goldsmiths' College, Maria Grey College.

Postgraduate Certificate in Education for external students or the **Teacher's Certificate:** Avery Hill College, Battersea College, Cavendish Square College, College of St. Mark and St. John, Whitelands College.

Teacher's Certificate and external degree: 4 years, Borough Road College, College of St. Mark and St. John, St. Mary's College.

Goldsmiths' College Teacher's Certificate: 3 years.

Institute Teacher's Certificate: 3 years at the constituent colleges.

Teacher's Certificates: 1-year courses:

Students training as technical teachers: Garnett College.

Students training as music teachers: Philippa Fawcett College, Trent Park College, College of St. Mark and St. John.

Students training as teachers of speech and drama: Trent Park College.

Students training as teachers of the Art of Movement: Trent Park College.

Graduates training to teach Physical Education as well as their degree subject: Chelsea College.

Art Teacher's Certificate: 1 year, Goldsmiths' College, Brighton College of Arts and Crafts, Hornsey School of Arts and Crafts.

Advanced Diploma in Education with special reference to Domestic Science: Battersea College: 1 year.

Advanced Diploma in Primary School Education: Froebel Institute: 1 year.

Advanced Diploma in the Education of Children in the Junior School: Maria Grey College: 1 year.

Certificate in the Teaching of English: 2-year part-time course for serving teachers.

Certificate in the Teaching of Mathematics: 2-year part-time course for serving teachers.

Certificate in the Teaching of Science: 2-year part-time course for serving teachers.

Certificate in the Theory and Practice of the Secondary School: 2-year part-time course for serving teachers.

Certificate in the Teaching of Music in the Junior School: 2-year part-time course for serving teachers.

Certificate in Junior School Education: 2-year part-time course for serving teachers.

(ix) DIPLOMAS IN MEDICINE AND VETERINARY MEDICINE

Academic Postgraduate Diplomas in:

Animal Health; Applied Parasitology and Entomology; Bacteriology; Clinical Medicine of the Tropics; Clinical Pathology; Occupational Hygiene; Public Health (all 1 year); Dietetics (2 terms and 6 months' practical work); Psychological Medicine (Part I after not less than 6 months' course and Part II after a course lasting 3 years); Tropical Public Health.

DIPLOMAS AND CERTIFICATES AWARDED BY INDIVIDUAL SCHOOLS OF THE UNIVERSITY IN ADDITION TO THOSE ALREADY LISTED

(i) COURTAULD INSTITUTE OF ART

Institute Certificate in the History of European Art: awarded on the results of an examination based on lectures open to the public.

(ii) INSTITUTE OF ARCHAEOLOGY

University Academic Postgraduate Diplomas: awarded in Indian, Prehistoric and Roman Archaeology; Western Asiatic Archaeology (all normally 3 years).

Institute Diploma in the Conservation of Historical Monuments: 2 years, postgraduate.

COURSES IN THEOLOGY

(i) KING'S COLLEGE THEOLOGICAL DEPARTMENT, STRAND, W.C.1

Male students are prepared for theological degrees of the University, except D.D. and for ordination in the Church of England: candidates for ordination spend one further year at Warminster College. Women students are prepared for the degree of B.D. and the Certificate in Religious Knowledge.

(ii) NEW COLLEGE, FINCHLEY ROAD, N.W.3

The College's main purpose is to train candidates for the Christian ministry, especially in Congregational churches. It also accepts students who wish to take a degree in theology for other purposes and the Academic Diploma in Theology.

(iii) RICHMOND COLLEGE, RICHMOND, SURREY

Students are mainly candidates accepted for training for the Methodist ministry.

DIPLOMAS AND CERTIFICATES AWARDED BY THE NON-MEDICAL SCHOOLS OF THE UNIVERSITY

(i) BEDFORD COLLEGE

College Diplomas: in Social Studies and Nuclear Physics (both 1 year).

(ii) IMPERIAL COLLEGE OF SCIENCE AND TECHNOLOGY

Imperial College is a federation of three institutions of earlier origin, the Royal College of Science, the Royal School of Mines and the City and Guilds College. The three constituent colleges have retained their identity and they divide the work of Imperial College between them. The Royal College of Science conducts the work in Pure Sciences: Chemistry, Physics, Mathematics, Botany, Zoology, Geology and Meteorology. The Royal School of Mines concentrates on Mining, Mineral Technology, Metallurgy, Mining Geology, Oil Technology, Geochemistry and Applied Geophysics. The City and Guilds College deals with the main branches of Engineering.

The College offers courses leading to the first degrees of London University and the associateships of the individual colleges; the same courses serve for the college associateships and the London B.Sc. Special or B.Sc.(Eng.). The following three-year courses for Honours degrees are available:

B.Sc. Special and A.R.C.S. (Associateship of the Royal College of Science) in Botany; Chemistry; Geology; Mathematics; Physics; and Zoology.

B.Sc. Special and A.R.S.M. (Associateship of the Royal School of Mines) in Mining Geology; Oil Technology.

B.Sc.(Eng.) and A.R.S.M. in Metallurgy; Mining; and Mineral Technology.

B.Sc.(Eng.) and A.C.G.I. (Associateship of the City and Guilds Institute) in Aeronautical Engineering; Chemical Engineering; Civil Engineering; Electrical Engineering; and Mechanical Engineering.

The College offers courses of research and advanced study open to non-London graduates leading to **Ph.D.** (in not less than 2 calendar years from B.Sc.); **M.Sc.**; **D.I.C.** (the Diploma of Imperial College).

Courses are available in:

Aeronautics

Aerodynamics and Aeronautical Structures.

Biochemistry

Botany and Plant Technology

Analytical Cytology; Bacteriology and Microbiology; Ecology; Genetics; Palaeobotany; Plant Pathology and Mycology; Plant Physiology; Taxonomy; Timber Technology.

Chemical Engineering and Chemical Technology

Chemical Engineering; Combustion; Fuel; High Pressure; Ceramic and Nuclear Technologies; Chemical Physics.

Civil Engineering

Concrete Structures and Technology; Engineering Hydrology; Highways; Hydraulic Engineering and Fluid Mechanics; Hydro-power; Public Health; Soil Mechanics; Structural Engineering.

Chemistry

Physical, Organic, Inorganic, Analytical.

Electrical Engineering

Applied Electron Physics; Automatic Control Systems; Communications and Electronics; Electrical Machines and Power Systems; Electrical Traction; Applications of Engineering in Medicine and Biology; Materials in Electrical Engineering.

Geology

Applied Geophysics; Engineering Geology; Geochemistry; Micropalaeontology and Palaeo-Ecology; Mining Geology; Ore Microscopy; Mineral Exploration; Oil Technology; Petroleum Reservoir Engineering.

Mathematics

Mathematical Physics; Pure Mathematics; Applied Mathematics; Statistics; Numerical Analysis; Mathematical Techniques of Operational Research.

Mechanical Engineering

Applied Mechanics; Thermal Power and Process Engineering; Nuclear Power; Production Engineering; Operational Research and Management studies.

Metallurgy

Extraction Metallurgy; Physical Metallurgy.

MeteorologyMining and Mineral Technology

Mining; Mineral Technology.

Physics

High Energy Physics; Theoretical Physics; Cosmic Ray Physics; Electron Physics; Technical Optics; Instrumental Technology; Cloud Physics; High Temperature Physics; Spectroscopy; Acoustics; Rock Magnetism.

Zoology and Applied Entomology

Zoology; Entomology; Applied Entomology; Parasitology; Nematology.

The Diploma of Membership of Imperial College (D.I.C.) (Postgraduate)

Most courses for the D.I.C. last one year and on some of them suitably qualified candidates can also enter for the M.Sc. degree. Courses are available in most of the areas of study listed above. The Diploma is awarded on examination, dissertation or thesis as decided by the head of the department concerned.

Classification of Imperial College Awards

A.R.C.S. (Geology); A.R.S.M. (Mining Geology; Oil Technology); B.Sc. (Special) (Geology; Mining Geology; Oil Technology)	1st, 2nd (Divs 1 and 2) or 3rd Class Honours
A.R.C.S. (Botany; Zoology; Chemistry; Mathematics; Physics); B.Sc. (Special) (Botany; Zoology; Chemistry; Mathematics; Physics); A.R.S.M. (Metallurgy; Mineral Technology; Mining); B.Sc. (Eng.) (Metallurgy; Mining Engineering, including Mineral Technology option)	1st, 2nd (Divs 1 and 2) or 3rd Class Honours
B.Sc. (Eng.) (Aeronautical; Chemical; Civil; Electrical; and Mechanical Engineering)	1st or 2nd (Divs 1 or 2) Class Honours or Pass
A.C.G.I. (Aeronautical; Chemical; Civil; Electrical; and Mechanical Engineering); D.I.C.; M.Sc.; Ph.D.	Unclassified

(iii) KING'S COLLEGE

Academic Diplomas: in Chemical Engineering and Powder Technology (both 1 year full-time).

Associateship of King's College (A.K.C.): open to men and women who have graduated after the normal three-year undergraduate course and have also attended prescribed courses in divinity and passed appropriate examinations.

(iv) LONDON SCHOOL OF ECONOMICS

Diploma in Social Administration: 1 year postgraduate, 2 years for non-graduates.

Diplomas: in the following subjects (all 1 year):

Economic and Social Administration; Social Workers in Mental Health; Personnel Administration; Applied Social Studies.

Diploma in Operational Research: 2 years.

Certificate in International Studies: 2 years.

(v) QUEEN MARY COLLEGE

Diploma in Nuclear Engineering: 1-year course for Honours graduates in Engineering, Science or Mathematics or students with equivalent qualifications.

(vi) ROYAL VETERINARY COLLEGE

Membership of the Royal College of Veterinary Science (M.R.C.V.S.).

(vii) SCHOOL OF ORIENTAL AND AFRICAN STUDIES

University Diplomas in:

Anthropology; Chinese Archaeology; Indian Archaeology; Comparative Philology; Law; Librarianship; Phonetics.

School Diplomas (1 to 3 years according to subject) in:

Certain African languages; African Law; Armenian; Islamic and Comparative Law; Kurdish; Pashto; Linguistics and Phonetics.

School Special Diplomas (1 to 3 years according to subject) in:

Bantu languages; Comparative Grammar of the Indo-Aryan Languages; Hebrew Palaeography and Epigraphy; Indian Palaeography and Epigraphy; Iranian; West African languages.

School Certificates (1 to 2 years, according to subject). The School awards Certificates, for which it provides instruction, in:

Phonetics; African Law; Islamic and Comparative Law; Indian Ethnography; African Ethnography.

(viii) UNIVERSITY COLLEGE

University Diploma in Fine Art: 4 years undergraduate.

Postgraduate University Diplomas (all normally 2 years) in:

Anthropology; Archaeology; Comparative Philology; Egyptology; Phonetics.

Postgraduate School Diplomas (1 year) in:

English Linguistic Studies; Chemical Engineering; Biochemical Engineering; Conservation; Micropalaeontology; Microwave Engineering; Space Science; Photogrammetry; Surveying.

College Certificate in Landscape Design: 2 years undergraduate.

College Certificate in Town Planning: 1 year undergraduate.

College Certificate in Phonetics: 1 year undergraduate.

College Certificate in Scandinavian Languages: 1 year undergraduate.

COURSES AVAILABLE AT UNDERGRADUATE MEDICAL AND DENTAL SCHOOLS

(i) CHARING CROSS HOSPITAL MEDICAL SCHOOL

L.R.C.P., M.R.C.S.: 'conjoint qualification' granted by the Royal Colleges of Physicians and Surgeons. In this school examinations for L.R.C.P., M.R.C.S. may be taken only by students intending to take University degrees in medicine.

(ii) GUY'S HOSPITAL MEDICAL SCHOOL

L.R.C.P., M.R.C.S.: *see (i) above.*

F.R.C.S.: 10-week full-time advanced revision course.

D.Phys.Med.: Part I—6-month part-time course; granted conjointly by the Royal Colleges of Physicians and Surgeons.

The school also offers courses leading to the following qualifications:

L.M.S.S.A.; M.R.C.P.; M.R.C.O.G.; D.A. (Diploma in Anaesthetics); **D.Obst.R.C.O.G.; D.C.H.** (Diploma in Child Health); **D.M.R.D.** (Diploma in Radiology) (Radiodiagnosis); **D.P.M.** (Diploma in Psychological Medicine); **D.P.H.; F.F.A.R.C.S.**

(iii) GUY'S HOSPITAL DENTAL SCHOOL

L.D.S.R.C.S. (Licentiate in Dental Surgery of the Royal College of Surgeons of England).

The school also offers a course leading to the **F.D.S.R.C.S.**

(iv) KING'S COLLEGE HOSPITAL MEDICAL SCHOOL

L.R.C.P., M.R.C.S.: *see (i) above.*

L.D.S.R.C.S.: 3-year clinical course.

Examinations for these qualifications may be taken only by students intending to take University degrees in medicine or dentistry. The school also offers courses leading to the following qualifications: **L.M.S.S.A.; F.R.C.O.G.; F.F.A.R.C.S.**

(v) LONDON HOSPITAL MEDICAL COLLEGE

L.R.C.P., M.R.C.S.: *see (i) above.*

L.D.S.R.C.S.

Examinations for the above qualifications may be taken only by students intending to take London degrees in Medicine or Dentistry.

M.R.C.P.: 3-month full-time or part-time advanced revision courses.

F.R.C.S.: 6-week part-time advanced revision course.

Diploma in Medical Jurisprudence (Granted by the Society of Apothecaries of London): Part I: 1-week full-time course; Part II: 1-week full-time course.

(vi) MIDDLESEX HOSPITAL MEDICAL SCHOOL

L.R.C.P., M.R.C.S.: examinations may normally be taken only by students intending to take London degrees in Medicine.

(vii) ROYAL DENTAL HOSPITAL OF LONDON

L.D.S.R.C.S.: 4 years.

D.Orth.R.C.S. (Diploma in Orthodontics of the Royal College of Surgeons of England): 1 year.

(viii) ROYAL FREE HOSPITAL SCHOOL OF MEDICINE

L.R.C.P., M.R.C.S.; F.R.C.S.; F.R.C.O.G.; F.F.A.R.C.S.; M.R.C.P.; M.R.C.O.G.; D.A.; D.C.H.; D.O. (Diploma in Ophthalmology); **D.P.M.; D.P.H.; D.R.C.O.G.**

(ix) ST. BARTHOLOMEW'S HOSPITAL MEDICAL COLLEGE

L.R.C.P., M.R.C.S.: *see (i) above.* The college is unwilling to accept students who are not also working for London degrees in Medicine.

F.R.C.S.: 8-week part-time advanced course.

D.M.R.D. and D.M.R.T.: Parts I and II.

L.M.S.S.A.

(x) ST. GEORGE'S HOSPITAL MEDICAL SCHOOL

L.R.C.P., M.R.C.S.: *see (i) above.*

F.R.C.S.: 9-week part-time course.

(xi) ST. MARY'S HOSPITAL MEDICAL SCHOOL

L.R.C.P., M.R.C.S.: *see (i) above.* The examinations may be taken only by students intending to take London degrees in Medicine.

F.R.C.S.; L.M.S.S.A.; D.R.C.O.G.; M.R.C.O.G.; D.A.; D.C.H.

(xii) ST. THOMAS'S HOSPITAL MEDICAL SCHOOL

L.R.C.P., M.R.C.S.: *see (i) above.*

F.R.C.S.: 8-week full-time advanced revision course.

M.R.C.P.; F.F.A.R.C.S.; F.R.C.O.G.; M.R.C.O.G.; D.Obst. R.C.O.G.; F.R.C.S.Ed.; D.O.; D.T.M. & H. (Diploma in Tropical Medicine and Hygiene); **D.C.H.; D.I.H.; D.L.O.** (Diploma in Laryngology and Otology); **D.A.; D.P.M.; D.Path.**

(xiii) UNIVERSITY COLLEGE HOSPITAL MEDICAL SCHOOL AND DENTAL SCHOOL

L.R.C.P., M.R.C.S.: *see (i) above.* The examinations may ordinarily be taken only by students qualified to take the University degree in Medicine after completing their studies.

L.D.S.R.C.S.; M.R.C.P.; F.R.C.S.; D.Obst.R.C.O.G.

(xiv) WESTMINSTER MEDICAL SCHOOL

L.R.C.P., M.R.C.S.: *see (i) above.* The examinations may usually be taken only by students intending to take the London degrees in Medicine.

The school offers a 6-week part-time course in oral surgery and exodontia; it does not lead to a qualification.

(xv) BRITISH POSTGRADUATE MEDICAL FEDERATION

The federation was established in 1945 for the further development of postgraduate medical education in London. It provides organised and correlated facilities for postgraduate teaching and research for qualified medical and dental practitioners from the United Kingdom and other countries in and outside the Commonwealth. The federation provides:

- (a) Training for prospective specialists, supplementing the work of the undergraduate medical and dental schools.
- (b) Advanced revision for practising specialists.
- (c) Instruction for medical and dental practitioners who, although not specialists, want more detailed knowledge of any branch of Medicine or Dentistry.
- (d) Continuing education of general practitioners.

Postgraduate education in the associated Institutes and the Hospitals includes full-time and part-time courses of advanced instruction, clinical clerkships, junior and senior resident hospital appointments and opportunities for research. Provision is made for candidates for the M.D., M.S., M.D.S. and Ph.D. degrees and courses are held for the Academic Postgraduate Diplomas in Clinical Pathology and Psychological Medicine of the University. In addition most Institutes hold conferences and symposia for consultants.

The federation organises short courses for general medical and dental practitioners and medical officers of local authorities in the London metropolitan regions and the Wessex region.

The federation comprises the following federated Institutes:

Postgraduate Medical School of London, Ducane Road, London, W.12; Institute of Basic Medical Sciences, Royal College of Surgeons of England, Lincoln's Inn Fields, London, W.C.2; Institute of Cancer Research, Royal Cancer Hospital, Fulham Road, London, S.W.3; Institute of Cardiology, 35, Wimpole Street, London, W.1; Institute of Child Health, The Hospital for Sick Children, Great Ormond Street, London, W.C.1; Institute of Dental Surgery, Eastman Dental Hospital, Gray's Inn Road, London, W.C.1; Institute of Dermatology, St. John's Hospital for Diseases of the Skin, London, W.C.2; Institute of Diseases of the Chest, Brompton Hospital, London, S.W.3; Institute of Laryngology and Otology,

Royal National Throat, Nose and Ear Hospital, 'Gray's Inn Road, London, W.C.1; Institute of Neurology, National Hospital, Queen Square, London, W.C.1; Institute of Obstetrics and Gynaecology, The Chelsea Hospital for Women, Dovehouse Street, London, S.W.3; Institute of Ophthalmology, Judd Street, London, W.C.1; Institute of Orthopaedics, Royal National Orthopaedic Hospital, Great Portland Street, London, W.1; Institute of Psychiatry, Maudsley Hospital, Denmark Hill, London, S.E.5; Institute of Urology, 10, Henrietta Street, London, W.C.2.

The federated Institutes provide the following courses and awards:

Diploma in Clinical Pathology (D.C.P.).

Diploma in Anaesthetics (D.A.).

Diploma in Radiology (Radiotherapy) (D.M.R.T.).

Courses of training in Clinical Cardiology, Electrocardiography, Radiology, Heart Surgery and Pathology.

Courses of instruction in Paediatrics.

Course leading to final F.D.S.R.C.S. and M.D.S.

Courses in Histopathology and Medical Mycology.

Courses in Chest Surgery and Chest Radiology.

Courses for higher degrees or F.R.C.S.

Courses of training for specialists.

Training for specialists and general practitioners.

Training for specialists and advanced tutorials for Fellowship in

Ophthalmology of the Royal College of Surgeons of England.

Courses of postgraduate training and research.

13-month course in Abnormal Psychology for Postgraduate

Diploma in Psychology.

Courses of training for specialists.

(xvi) LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE

Courses are offered leading to the following qualifications of the University and/or the conjoint board of the Royal College of Physicians and the Royal College of Surgeons:

Postgraduate Diploma in Public Health (D.P.H.(Lond.)):

9-month course for qualified medical practitioners.

Postgraduate Diploma in Industrial Health (D.I.H.)

(R.C.P. & S.): 11-week full-time course for holders of the D.P.H.; also available to registered medical practitioners who require an intensive training in the practice of industrial medicine.

Diploma in Bacteriology (London) (Dip.Bact.): 9-month course for graduates in Medicine, Science, Veterinary Science, Pharmacy and suitably qualified non-graduates.

Diploma in Tropical Medicine and Hygiene (D.T.M. & H.) (R.C.P. & S.): 5-month course for qualified medical practitioners.

Diploma in Clinical Medicine of the Tropics (London): 9-month course for qualified medical practitioners, presenting tropical medicine mainly for clinicians.

Diploma in Applied Parasitology and Entomology (London) (D.A.P. & E.): 9-month course for those with suitable qualifications in Medicine, Veterinary Medicine or Science.

Diploma in Tropical Public Health (London): intended for medical graduates proposing to work in the fields of preventive and social medicine, including administration, in tropical countries.

Diploma in Occupational Hygiene (London): 9 months.

LOUGHBOROUGH COLLEGE OF TECHNOLOGY

(proposed Loughborough University of Technology)
Loughborough, Leicestershire

All courses have hitherto led to the award of the **Diploma of Loughborough College**, which was awarded with First Class or Second Class Honours, or at Pass standard, and entitled the holder to the designatory letters D.L.C.(Eng.) or D.L.C.(Sci.). Some courses were recognised as leading to the award of the **Diploma in Technology**; these courses will now lead to a degree of Loughborough University, with the same classes of result, those involving periods of training in industry to the degree of Bachelor of Technology (B.Tech.) and others to the degree of Bachelor of Science. Other undergraduate courses are being considered for the award of appropriate first degrees.

FIRST DEGREES

B.Tech. Honours: 4-year sandwich courses (including integrated industrial and professional training) are available in the following subjects:

Engineering

Aeronautical; Automotive; Civil; Electrical; Foundry Technology; Mechanical; Production; General.

Pure and Applied Science

Chemical Engineering; Industrial Chemistry; Chemistry and Management Studies; Mathematics; Physics.

Human and Environmental Studies

Ergonomics and Cybernetics; Humanities and Technology; Industrial Engineering and Management.

B.Sc. Honours: a 3-year course is available in Civil Engineering.

HIGHER DEGREES

Postgraduate courses have hitherto led to the **Associateship of Loughborough College (A.L.C.)**.

M.Sc.: One-year courses are offered in:

Industrial Engineering and Management; Aeronautical Design Engineering; Ergonomics and Cybernetics; Instrumentation and Control; Aspects of Metallurgy for Engineering and Science Graduates; Economics and Administration in the Petroleum Industry; Petroleum Technology; Process Dynamics and Optimisation in Chemical Engineering; Modern Methods of Chemical Analysis; Surface Chemistry; Radiochemistry; Transfer Processes; Mass Transfer; Particle Technology; Construction.

The College also arranges numerous short courses for graduates in industry.

VICTORIA UNIVERSITY OF MANCHESTER

Oxford Road, Manchester, 13
(Abbreviation: Manc.)

FIRST DEGREES

(i) FIRST DEGREES IN ARTS, ECONOMIC AND SOCIAL STUDIES

B.A. General: 3 years. Classification of Award: Ordinary—Divisions 1, 2 (subdivs 1 or 2).

Students take two special subjects for Finals.

B.A. Honours: 3 years except where otherwise indicated. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Pass.

Courses are available in the following subjects:

American Studies; Architecture (5 years); Biblical Studies; Classics; Drama; English Language and Literature; English and American Literature (4 years); English and Classical Arabic; English and Drama (4 years); English and History of Art (4 years); English and Italian (4 years); English and Philosophy; French Studies; French and Drama (4 years); Geography; German Language and Literature; German and Drama (4 years); German and Philosophy; Greek; Greek and Ancient History; Greek and English; History; Italian Studies; Latin; Latin and Ancient History; Latin and English; Mathematics; Mediaeval Studies; Modern History and Economics and Politics; Modern Languages (two from among French, German, Italian, Russian and Spanish); Oriental Studies (4 years); Philosophy; Politics and Modern History; Psychology; Russian Studies; Spanish Studies; Spanish and Classical Arabic (4 years); Town and Country Planning (4 years).

B.A.(Theol.) Ordinary (Bachelor of Arts in Theology): 3 years. Classification of Award: Divisions 1, 2 (subdivs 1 or 2).

B.D. Honours: 3 years, or 2 years after an intermediate course in Arts. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class.

B.A.(Mus.) Ordinary: 3 years. Classification of Award: Divisions 1, 2 (subdivs 1 or 2).

Mus.B. Honours: 3 or 4 years according to entry qualifications. Classification of Honours: 1st Class, 2nd Class or Ordinary.

B.A.(Econ.) Ordinary: 3 years full-time or 4 years part-time. Classification of Award: the degree may be awarded with Distinction.

Courses are available in the following subjects:

Economics; Politics; Sociology and Social Anthropology; Economic and Social History; Economic and Social Statistics; Accounting; Social Administration.

B.A.(Econ.) Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class.

Courses are available in the same subjects as for the Ordinary degree.

B.A.(Admin.) Ordinary (Bachelor of Arts in Administration): 3 years full-time or 4 years part-time. Classification of Award: the degree may be awarded with Distinction.

LL.B. Ordinary: 3 years.

LL.B. Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Ordinary.

(ii) FIRST DEGREES IN SCIENCE

B.Sc. Ordinary: 3 years. Classification of Award: Divisions 1 or 2. The only Ordinary B.Sc. course available is in Pharmacy.

B.Sc. General Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Ordinary.

Courses are available in the following combinations of subjects:

Chemistry and Physics; Botany and Zoology; Botany and Geology; Geology and Zoology; Chemistry and Botany; Chemistry and Geology; Chemistry and Zoology; Geography and Geology; Chemistry and Physiology.

B.Sc. Honours: 3 or 4 years according to entry qualifications. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Ordinary.

Courses are available in the following subjects:

Botany; Biological Chemistry; Chemical Physics; Chemistry; Chemistry and Metallurgy; Computer Science; Aeronautical Engineering; Civil Engineering; Electrical Engineering; Mechanical Engineering; Geography; Geology; Mathematics; Mathematics and Philosophy; Metallurgy; Pharmacy; Physics; Physics and Electronic Engineering; Physics and Metallurgy; Physiology; Physiology and Psychology; Psychology; Psychology and Pharmacology; Psychology and Zoology; Zoology.

B.Sc. Honours in Combined Studies: 3 years. A new course, introduced in 1965. The course combines Electrical Engineering or Mathematics with European Studies and a modern language. German was the only language offered in 1965, but it is expected that French and Russian will also be available in 1966-67.

(iii) FIRST DEGREES IN TECHNOLOGY

Courses for these degrees are taken at the Manchester College of

Science and Technology which is the University Faculty of Technology.

B.Sc. and A.M.C.S.T. Ordinary (Associateship of the Manchester College of Science and Technology): 3 years. Classification of Award: Divisions 1, 2 or 3.

Students who do well in their first year may be allowed to transfer to an Honours course; if so, the complete course lasts 4 years. Ordinary courses are available in Mathematics, Ophthalmic Optics and Paper Science.

B.Sc. Honours and A.M.C.S.T.: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Pass.

Courses are available in the following subjects:

Biochemistry; Building; Chemical Engineering; Chemistry; Civil Engineering; Colouring Matters; Electrical Engineering; Electronic Engineering; General Textile Technology; Management Sciences; Mathematics; Metallurgy; Paper Science; Physics; Polymer Chemistry; Polymer Technology (Chemistry); Polymer Technology (Physics); Textile Chemistry; Textile Technology; Automatic Control and Systems Engineering with Management Sciences; Communications Engineering with Management Sciences; Mathematics with Management Sciences.

(iv) FIRST DEGREES IN MEDICINE

M.B., Ch.B.: 6 years. Classification of Award: the degree may be awarded with Distinction in individual subjects of the examination.

B.D.S.: 5 years and 1 term. Classification of Award: the degree may be awarded with Honours. Students who fail the degree examination may be awarded the Licentiate in Dental Surgery.

HIGHER DEGREES

(i) MASTERS' DEGREES

M.A.; M.Sc.; M.A.(Econ.); LL.M.; M.Ed.: awarded after at least 1 year's full-time research (2 years in the case of non-Manchester graduates). The degree of M.A.(Econ.) may be awarded, on the result of a dissertation and examinations, after courses of instruction in each of the following subjects:

Agricultural Economics; Economics; Economic Statistics; Government; Social Administration; Social Statistics; Sociology and Social Anthropology.

The degree of M.Sc. may be awarded, on the result of a dissertation and examinations, after courses of instruction in each of the following subjects:

Applied Acoustics; Applied Electronics; Theory and Practice of Automatic Control; Ceramics; Corrosion Science; Electrical Power Systems Engineering; Hydro-Carbon Chemistry; Industrial Design Technology; Machine Tool Technology; Solid State Electronics; Structural Engineering; U.H.F. and Microwave Techniques.

(ii) DOCTORATES

Ph.D.; D.Sc.; LL.D.; D.D.: awarded to Masters (or the equivalent) of 4 years' standing (6 years in the case of the D.D.) after at least 2 years' research.

Litt.D.: open only to Manchester Masters or Ph.D.'s.

(iii) MEDICAL DEGREES

M.D.; Ch.M.; M.D.S.; D.D.S.

HONORARY DEGREES

M.A.; M.Sc.; M.A.(Econ.); M.Ed.; Litt.D.; LL.D.; D.D.; Mus.D.; D.Sc.

DIPLOMAS AWARDED

Diplomas of Advanced Study in Science: 1 year postgraduate. Courses are available in:

Physics; Astronomy; Nuclear Engineering; Numerical Analysis; Mechanics of Fluids.

Diplomas of Advanced Study in Economics and Social Studies: 1 year postgraduate. Courses are available in:

Business Management; Economic Development; Social Administration; Industrial Sociology; Public Administration.

Diploma in Bacteriology (Dip.Bact.): 1 year postgraduate.

Diploma in General Linguistics: 1 year postgraduate.

Diploma in International Law: 1 year postgraduate.

Diploma in Statistics: 1 year postgraduate.

Diplomas in Technical Science: 1 year postgraduate.
Courses are available in:

Industrial Administration; Personnel Management; Production Engineering.

Diploma in Youth Work: 1 year postgraduate.

Diploma in Adult Education: 1 year. For graduates and qualified teachers.

Diploma in Audiology: 1 year postgraduate.

Diploma in Educational Guidance: 1 year. For approved teachers or psychologists.

Diploma in Educational Psychology (Child Guidance): 1 year. For approved teachers or psychologists.

Diploma in the Education of Handicapped Children: 1 year. For qualified teachers with 5 years' experience.

Diploma in the Teaching of English Overseas: 1 year postgraduate.

Diploma of Advanced Study in Education: 2 or 3 years.

Diploma in Architecture: 5 years.

Diploma in Town and Country Planning (Dip.T.P.): 2 years full-time or part-time postgraduate or post-qualification.

Diploma in Drama: 1 year postgraduate.

Licentiate in Dental Surgery: 5 years.

Diploma in Public Health: 1 year for registered practitioners.

Diploma in Psychological Medicine (D.P.M.): 8 terms for registered practitioners.

Diploma in Community Nursing: 4 years.

CERTIFICATES AWARDED

Certificate for Psychiatric Social Workers: 1 year.

Certificate in Theology: 3 years.

Certificate in Biblical Knowledge: 1 year.

Certificate in Technology: 3 years in association with the Manchester College of Science and Technology.

Certificate in Education: 1 year for graduates intending to become teachers.

Teacher's Certificate: 3 years. For students in the constituent colleges of education.

Art Teacher's Certificate: 1 year.

University Certificate for Teachers of the Deaf: 1 year. For graduates and qualified teachers.

MANCHESTER BUSINESS SCHOOL

The first course offered by the School opened in September 1965. It was a 12-week course for 15 candidates for senior management between the ages of 35 and 40.

UNIVERSITY OF NEWCASTLE UPON TYNE

Newcastle upon Tyne, 2
(Abbreviation: Newc.)

FIRST DEGREES

(i) FIRST DEGREES IN ARTS

B.A. General: 3 years. Classification of Award: the degree may be awarded with Credit or Distinction in any subject.

Students take three subjects, in an approved combination, from among the following:

Ancient History; Anthropology; Danish; Divinity; Economics; English Language and Literature; French; Geography; German; Greek; History of Art and Architecture; Latin; Mathematics, Pure; Modern History; Music; Norwegian; Philosophy; Politics; Psychology; a Science subject; Spanish; Swedish.

B.A. Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Pass.

Courses are available in the following:

Anthropology; Classics; Economics and Anthropology; Economics and Geography; English Language and Literature; English and Philosophy; French; French and German; French and Spanish; Geography; Geography and Anthropology; German; German and Spanish; Latin;

Mathematics; Modern History; Music; Philosophy; Philosophy and Psychology; Politics and Anthropology; Politics and Economics; Politics and Social Administration; Scandinavian Studies; Spanish and Latin American Studies; Theology.

B.A.(S.S.) (Social Studies): 3 years. Classification of Award: Divisions I, II and III.

Students take the following subjects for the Final Examination:

Social Economics; Political and Social Doctrines or Philosophy; Family Law and English Penal Theory and Practice or Industrial Relations.

B.A.(Econ.) Honours in Economic Studies: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or General.

For the Final Examination students take courses in:

Principles of Economics; Money, Employment and International Trade; Economic Organisation; Public Finance; Economic Statistics or History of Economic Thought; a special subject.

B.A. Honours in Economics and Accounting: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Pass.

B.A. Honours in Economics and Social Administration: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Pass.

B.A. in Fine Art: 4 years. Classification of Award: 1st Class Honours, 2nd Class Honours (Divs 1 or 2) or the Certificate in Fine Art.

B.A. Honours in Land Use Studies: 4 years. Classification of Honours: 1st Class, 2nd Class or Pass.

B.A. in Architectural Studies and B.Arch.: 5 years (3 to B.A. and 2 to B.Arch.). Classification of Award: B.Arch.—1st Class Honours, 2nd Class Honours or Pass.

B.Ed.(Speech): 3 years. Classification of Award: Divisions I, II or III.

The subjects of the Final Examination are Speech and Speech Pathology, Psychology and Neurology.

LL.B. Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Pass.

(ii) **FIRST DEGREES IN SCIENCE**

B.Sc. General (Pure Science and Applied Science): 3 years. Classification of Awards: Pure Science—Pass, but candidates who have done well may be placed in a first Division. Applied Science—Pass, but candidates who have done well may be awarded the General Degree with Honours.

Courses are available in the following:

Pure Science

2 from among Anatomy; Bacteriology; Botany; Chemistry; Geography; Geology; Mathematics; Physics; Physiology; Zoology.

Applied Science

1 from among Chemical Engineering; Civil Engineering; Mechanical Engineering; Electrical Engineering; Marine Engineering; Metallurgy; Mining Engineering; Naval Architecture.

B.Sc. Ordinary (Applied Science): 3 years.

Courses are available in the following subjects:

Chemical Engineering; Civil Engineering; Electrical Engineering; Marine Engineering; Mechanical Engineering; Metallurgy; Mining Engineering; Naval Architecture.

B.Sc. Honours (Pure Science and Applied Science): 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or, in Applied Science, Ordinary.

Courses are available in the following subjects:

Pure Science

Anatomy; Bacteriology; Botany; Chemistry; Geography; Geology; Mathematics; Physics; Physiology; Zoology.

Applied Science

Chemical Engineering; Civil Engineering; Electrical Engineering; Marine Engineering; Mechanical Engineering; Metallurgy; Mining Engineering; Naval Architecture.

B.Sc. General Honours (Pure Science): 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or General. Students follow two subjects chosen from among:

Bacteriology; Botany; Chemistry; Genetics; Geography; Geology; Mathematics; Metallurgy; Physics; Physiology; Surveying; Zoology.

B.Sc. Pass in Agriculture: 3 years.

Courses are available in the following subjects:

Agriculture; Soil Science; Agricultural Biochemistry; Agricultural Zoology; Plant Science; Agricultural Engineering.

B.Sc. Honours in Agriculture: 4 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Pass.

(iii) FIRST DEGREES IN MEDICINE

M.B., B.S.: 6 years. Classification of Award: 1st or 2nd Class Honours may be awarded on the results of the examination as a whole. Distinction may be awarded in any subject.

B.D.S.: 6 years. Classification of Award: 1st or 2nd Class Honours may be awarded.

HIGHER DEGREES

(i) MASTERS' DEGREES

M.A.: by research and thesis 2 years after graduation; 2 years full-time, or 1 year full-time and 1 year part-time, or 3 years part-time.

M.A. (Economic Studies): not less than 2 years; research and thesis or course.

M.Sc.: by research and thesis (and in some cases by examination also) or by courses in:

Pure Science

Applied Mathematics; Chemistry of Natural Products; Electrochemistry and Radioactivity; Geophysics and Planetary Physics; Inorganic Chemistry; Mathematical Statistics; Numerical Analysis and Automatic Computing; Pure Mathematics; Solid State Physics.

Applied Science

Chemical Engineering Science; Public Health Engineering; Rock Mechanics and Strata Control.

Agriculture

Agricultural Engineering; Soil Science.

M.Com.: by thesis, 2 years after graduation.

M.Ed.: 2 years full-time or 3 years part-time.

LL.M.: not less than 2 years' advanced study or research.

(ii) DOCTORATES

Ph.D.: 3 years' advanced study or research.

D.Litt.: 10 years from graduation for a work of high distinction, published or to be published.

D.Sc.: 4 years from M.Sc. or Ph.D. or 7 years from B.Sc.

LL.D.: 4 years from LL.M. or 6 years from LL.B.

(iii) HIGHER MEDICAL DEGREES

M.D. or M.D.S.: 2 years from corresponding bachelor's degree.

M.S.: 5 years from M.B., B.S.

D.Hy. (Doctor of Hygiene): 6 years from M.B., B.S.

D.D.Sc.: 4 years from M.D.S. or 6 years from B.D.S.

HONORARY DEGREES

All higher degrees except that of Ph.D. may be conferred as honorary degrees. The degrees of D.C.L. and D.Ch. are awarded only as honorary degrees.

DIPLOMAS AWARDED

(i) POSTGRADUATE DIPLOMAS

Diploma in Applied Electronics: 1 year.

Diploma in Electrical Power Engineering: 1 year.

Diploma in Highway and Traffic Engineering: 1 year.

Diploma in Hydrology: 1 year.

Diploma in Marine Engineering: 1 year.

Diploma in Numerical Analysis and Automatic Computing: 1 year.

Diploma in Production Engineering: 1 year.

Diploma in Public Health Engineering: 1 year.

Diploma in Advanced Legal Studies: 1 year.

Diploma in Anthropology: usually 2 years after graduation.

Diploma in Biblical Studies: 1 year full-time or 2 years part-time.

Diploma in Data Processing in Business Administration: 1 year.

Diploma in Foreign Languages: 1 year in French, German, Spanish, Swedish, Danish or Norwegian.

Art Teacher's Diploma: 1 year for appropriately qualified candidates.

Diploma in Education: 1 year for graduates intending to become teachers.

Diploma in Clinical Psychology: 2 years for graduates in Psychology or persons with equivalent qualifications.

Diploma in Psychological Medicine: 2 years part-time.

Diploma in Public Health: 5 terms part-time for candidates 2 years after graduation.

(ii) DIPLOMAS OTHER THAN POSTGRADUATE DIPLOMAS

Diploma in Architecture: 5 years; may be awarded with Distinction.

Diploma in Landscape Design: 1 year for candidates with an approved university qualification or some other approved qualification.

Diploma in Town Planning: 1 year after Certificate.

Diploma in Economic Studies: 2 years.

Diploma in Public Administration (D.P.A.): 2 years.

CERTIFICATES AWARDED

(i) POSTGRADUATE CERTIFICATES

Certificate in Applied Social Studies: 1 year

Certificate in Coal Preparation: 1 year.

Certificate in Applied Electronics: 1 year.

Certificate in Electrical Power Engineering: 1 year.

Certificate in Fuel Technology: 1 year.

Certificate in Highway and Traffic Engineering: 1 year.

Certificate in Ore Dressing: 1 year.

Certificate in Production Engineering: 1 year.

Certificate in Public Health Engineering: 1 year.

Certificate in Structural Design: 1 year.

Certificate in Biblical Studies: 1 year full-time or 2 years part-time.

(ii) CERTIFICATES OTHER THAN POSTGRADUATE CERTIFICATES

Certificate in First Aid (Mining): 2 years for undergraduates.

Certificate in Town and Country Planning: 1 to 2 years full-time, 2 to 3 years part-time according to qualifications.

Certificate in Social Studies: 2 years.

Certificate in Fine Art: 2 to 3 years part-time.

NORTHAMPTON COLLEGE OF ADVANCED TECHNOLOGY

(University designate)

St. John Street, London, E.C.1

The College has had the status of an Institution with recognised teachers of the University of London for over 50 years; students have followed courses leading to the degree of B.Sc.(Eng.) in Civil, Mechanical, Electrical and Aeronautical Engineering and to the Diploma in Technology. The College has a long tradition of training ophthalmic opticians who, in addition to taking the Diploma of the College, have also taken the professional examinations of the British Optical Association and the Worshipful Company of Spectacle Makers.

FIRST DEGREES

B.Sc.: 3 years. Courses available in:

Aeronautical Engineering; Civil Engineering; Mechanical Engineering; Applied Mathematics; Applied Physics; Ophthalmic Optics.

4 years. Sandwich courses available in:

Applied Mathematics; Applied Physics; Industrial Chemistry.

4½ years. Sandwich courses available in:

Aeronautical Engineering; Airline Engineering; Civil Engineering; Electrical Engineering; Instrument and Control Engineering; Mechanical Engineering; Production Engineering.

Social and Applied Sciences courses in Economics with Technology, Philosophy with Physics, and Social Sciences may be offered in 1966.

HIGHER DEGREES

M.Sc.; Ph.D.

UNIVERSITY OF NOTTINGHAM

University Park, Nottingham
(Abbreviation: Nott.)

FIRST DEGREES

Most courses start as Honours degree courses, but in the Faculties of Arts and Sciences candidates may be transferred to Ordinary degree courses at the end of the first year or after Part I. Candidates for Honours who do not reach Honours standard may be awarded a Pass degree.

(i) FIRST DEGREES IN ARTS

B.A. Ordinary: 3 years. Classification of Award: Divisions 1 and 2.

Honours students may be transferred to a Pass degree course at the end of their first year. They may take four or five papers in Part I and five or six papers in Part II.

B.A. Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Pass.

Courses are available in the following subjects:

Arts

Architecture and Environmental Design; Classical Studies; English Studies; Fine Art or Art History; French Studies; Geography; German Studies; Economic and Social History; Mediaeval and Modern History; Latin Studies; Mathematics; Music; Philosophy; Russian Studies; Spanish; Theology.

Social Science

Economics; Industrial Economics; Economics and Economic History; Economics and Social History; Geography; Law; Politics; Psychology; Social Administration; Sociology.

B.A. Joint Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Pass.

Courses are available in the following combinations of subjects:

English and Economic and Social History; English and Philosophy; French and German; French and Spanish; French and Russian; German and Philosophy; German and Russian; Latin and French; Latin and Spanish; Mathematics and Philosophy; Spanish and German; Spanish and Russian; Theology and Philosophy.

B.Mus. Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Pass.

LL.B. Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2) or Pass.

B.Ed.: a new 4-year course, introduced in 1965-66, for students at Loughborough and Nottingham Colleges of Education, two of the training colleges in the University's Institute of Education, leading to the Institute Teacher's Certificate and the degree.

(ii) FIRST DEGREES IN SCIENCE AND TECHNOLOGY

Four-year courses are offered, but are reduced to three years if candidates are exempted from the Intermediate course and examination by reaching a satisfactory standard in the G.C.E. or the equivalent.

B.Sc. Ordinary (Pure and Applied Science, Agriculture and Horticulture): 4 or 3 years. Classification of Award: Divisions 1 or 2.

B.Sc. Honours (Pure and Applied Science): 4 or 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Pass.

Students all enter Honours courses but may be transferred to Ordinary degree courses at the end of the second Post-Intermediate year; Pass degrees may be awarded on the results of Honours examinations.

Courses in the following subjects are available:

Botany; Chemistry; Geography; Geology; Mathematics; Physics; Psychology; Zoology; Chemical Engineering; Civil Engineering; Electrical Engineering; Mechanical Engineering; Metallurgy; Mining Engineering; Production Engineering; Theoretical Mechanics.

B.Sc. Joint Honours (Pure and Applied Science): 4 or 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Pass.

Courses are available in the following combinations of subjects:

Botany and Zoology; Chemistry and Botany; Chemistry and Geology; Chemistry and Zoology; Geology and Geography; Mathematics and Economics; Mathematics and Geography; Mathematics and Philosophy; Mathematics and Physics; Metallurgy and Mining; Physics and Chemistry; Physics and Geology; Psychology and Physiology.

B.Sc. Honours and B.Sc. General Honours in Agriculture and Horticulture: 4 or 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Pass.

All students follow the same courses for two years after the Intermediate examination for Part I and then divide for their last year into B.Sc. Honours courses (Agricultural Biochemistry; Agricultural Botany; Agricultural Microbiology; Agricultural Zoology; Agronomy; Animal Production; Food Science; Horticulture; or Soil Science), or B.Sc. General Honours courses (Agriculture; Horticulture; or Food Science) or B.Sc. Ordinary courses.

B.Pharm.: 4 or 3 years. Classification of Award: Divisions 1 and 2.

Candidates may be exempted from Intermediate. All students follow the same course to Part I, the results of which determine their admission to a Part II course for a Pass degree or an Honours degree.

B.Pharm. Honours: 4 or 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Pass.

HIGHER DEGREES

(i) MASTERS' DEGREES AND BACHELOR OF DIVINITY

These degrees are awarded to Nottingham and other graduates after a period of research work (at least 1 year for Nottingham graduates and 2 years for others). They may also be awarded to non-graduates under certain conditions, after research lasting at least 4 years.

M.A.

M.Ed.: Candidates must have the University Diploma in Educational Studies.

M.A. in Classics and M.Sc. in Mathematics and Mycology: awarded on examination after an advanced course of instruction lasting at least 1 year.

M.Sc. in Water Relations of Plants: awarded on examination after an advanced course of instruction lasting 2 years.

M.Sc. in Agricultural Economics: awarded on examination after an advanced course of instruction of at least 4 terms.

M.Sc. in Animal Science: awarded on examination during and dissertation after an advanced course of instruction lasting 2 years.

M.Sc. in Food Science: awarded on examination after an advanced course of study lasting not less than 1 year.

M.Sc. in Soil Science and Plant Nutrition: awarded on examination and dissertation after an advanced course of study lasting not less than 1 year.

Master's degree in Urban and Regional Planning: course introduced in 1966; 1 year full-time and 1 year part-time for graduates and others holding appropriate qualifications.

B.D.: awarded to graduates after at least 3 years' research (2 years for holders of a higher degree by examination or research in theology) who pass a qualifying examination and present a satisfactory thesis. Candidates with 1st or 2nd Class Honours in Theology or a higher degree by examination or research in Theology may be exempted from the qualifying examination.

(ii) DOCTORATES

Ph.D.: awarded to graduates after not less than 2 years' full-time directed research in the University; part-time research for not less than 4 years may be permitted if substantial laboratory work is not involved.

D.Litt.; D.Sc.; D.D.; LL.D.; D.Mus.: these degrees are conferred on Nottingham graduates of at least 7 years' standing or on graduates of other approved universities of at least 7 years' standing who have been full-time members of the staff of the University for at least 4 years for distinguished, substantial and original contributions to learning.

HONORARY DEGREES

D.D.; LL.D.; D.Litt.; D.Mus.; D.Sc.; M.A.

DIPLOMAS AWARDED

Postgraduate Diploma in English Studies for Overseas Students: 1 year, for candidates with qualifications comparable with those of a British graduate.

Diploma in Adult Education: 1 year postgraduate, for candidates wishing to prepare themselves for full-time teaching or administrative work in adult education.

Diploma in Religious Education: 1 year full-time for graduates, normally with Honours in subjects other than Theology; 3 years part-time for trained qualified teachers with not less than 3 years' approved teaching experience.

Diploma in Educational Studies: 2 years part-time for graduates with 2 years' approved experience in education.

Diploma in Education: (begins 1965) 1 year full-time for experienced qualified serving teachers; advanced study of the development of school children.

Diplomas in Primary and Secondary Education: 3 years part-time for experienced qualified teachers wishing to take up higher appointments in primary or secondary education.

Diploma in the Education of Backward Children: 3-year part-time course for trained qualified teachers.

Diploma in Political, Economic and Social Studies for External Students: 4 years part-time attendance at extramural courses; candidates must be over 21 and pass an entrance examination.

Diploma in Applied Social Studies: 17-month course for graduates who have not studied social science and wish to enter the field of child care or probation.

CERTIFICATES AWARDED

Advanced Certificate in English Studies for Overseas Students: 1 year for graduates or undergraduates of recognised overseas universities.

Certificate in Education: 1 year postgraduate.

Certificate in Religious Education: 2 years part-time for trained qualified teachers with at least 3 years' approved teaching experience, preferably including some practical experience in religious education in school.

Certificate in Theological and Educational Studies: awarded jointly by the University and the Paton Congregational College, Nottingham; 4 years, 1 in Paton College and 3 partly in the Institute of Education and the College.

UNIVERSITY OF OXFORD

Oxford

(Abbreviation: Oxon.)

FIRST DEGREES

- (i) FIRST DEGREES IN ARTS, SOCIAL STUDIES, PURE SCIENCE AND ENGINEERING

B.A. Pass and B.A. Honours: 3 or 4 years. Classification of Honours: 1st Class, 2nd Class, 3rd Class, 4th Class.

The degree of B.A. is the first degree in both Arts and Science subjects. The Oxford degree of B.Sc. is a postgraduate degree.

Candidates for an Honours degree must pass both the first ('moderations') and second public examinations. In the first examination candidates must pass in one of the following (in honour moderations the results are classified as in the second public examination, except that there are three classes only in Mathematics, Physics and Engineering Science):

Honour Classical moderations; Honour Mathematics moderations; Honour Theological moderations; Honour moderations in Physics, Mathematics and Engineering Science; Law moderations; Preliminary Natural Science; Preliminary Geography; Preliminary Modern Languages; Preliminary English; Preliminary Oriental Studies; Preliminary Classical (Greek and Latin) Languages; Preliminary Theology; Preliminary Philosophy, Politics and Economics; Preliminary Music; Preliminary Psychology, Philosophy and Physiology; Preliminary Physiology; Preliminary Biology; Preliminary Geology.

B.A. Pass: candidates must pass in three subjects, including a language other than English.

B.A. Honours: candidates for Honours must reach an appropriate standard in one of the following:

Arts and Social Studies

Literae Humaniores (Greek and Latin, Philosophy and Ancient History); English Language and Literature; Geography; Jurisprudence; Modern History; Modern Languages (French, German, Italian, Spanish, Russian, Mediaeval and Modern Greek, or Portuguese); Music; Oriental Studies (Sanskrit, Arabic, Hebrew, Persian, Egyptian, Chinese or Japanese); Philosophy, Politics and Economics; Psychology with Philosophy; Theology.

Pure Science and Engineering

Mathematics; Natural Science—Animal Physiology; Biochemistry; Botany; Chemistry; Engineering Science; Engineering Science and Economics; Geology; Metallurgy; Physics; Physiology with Philosophy; Physiology with Psychology; Zoology; Agriculture; Forestry.

(ii) FIRST DEGREES IN MEDICINE

B.M., B.Ch.: 6 years. The B.M., B.Ch. is the conjoint first degree in Medicine. With very few exceptions, it is not awarded to candidates who have not first taken the degree of B.A., which is normally obtained after the first three years by taking Honours in certain subjects studied for the B.M. The last three years of the course are devoted to clinical studies and may be spent either in the Oxford clinical school or in approved clinical schools elsewhere.

HIGHER DEGREES

(i) POST-B.A.

M.A.: the degree of M.A. is open only to Oxford B.A.'s or members of the University staff and is awarded without further examination on payment of certain fees 7 years after matriculation.

B.Phil.: a minimum of 1 year's study for Oxford graduates—2 years for others—is required. The degree is granted after an examination in any of the following:

Management Studies; Greek and Latin Languages and Literature; Politics; Economics; European History; Commonwealth and American History; English Studies; Oriental Studies.

The degree courses are open only to candidates (usually graduates) who have been accepted by the appropriate Faculty Board.

B.Sc., B.Litt.: a minimum of 1 year's study is required. The degrees are granted on the satisfactory completion of an approved

course of special study or research, pursued under supervision, for the most part at Oxford. Application for admission to a course may be made by anyone who produces sufficient evidence of his ability and either is a member of the University who has obtained the B.A. or has taken an approved degree at an approved University or is held by the Faculty Board concerned to be fully qualified to engage in research, or (for the B.Litt. only) has obtained an Oxford Diploma with distinction. Candidates for the degree of B.Litt. must take a probationary period of training in research methods, do a special piece of research work and write a thesis; they may be required to pass a written examination. The B.Sc. is confined to the study of Medicine, Mathematics, Natural Science, Anthropology, Geography, Agriculture, Forestry and Psychology.

B.Mus.: a minimum of 1 year's study is required. The award is open only to students who have taken the degree of B.A. with 1st or 2nd Class Honours in Music. Candidates must pass a written examination and submit a musical exercise.

B.C.L. (Bachelor of Civil Law): a minimum of 2 years' study is required. The examination is open either to Oxford B.A.'s or under certain conditions to graduates of other universities. The degree is awarded with classified Honours (Classes I and II). The subjects of the course are Roman and English Law together with three of the following:

Modern Jurisprudence; Conditiones; Evidence; Criminal Law and Penology; Public International Law; Roman-Dutch Law; Legal History; Administrative Law; Comparative Law of Matrimonial Causes.

B.D.: a minimum of 2 years' study is required. The degree is open to candidates over 21 who have passed a qualifying examination in Christian Theology and have submitted a thesis of sufficient merit. The qualifying examination is open to Oxford M.A.'s, to persons who have, not less than 5 terms before, passed all examinations for the Oxford B.A. and, under certain conditions, to graduates of other universities. Candidates with 1st or 2nd Class Honours in a final Honours school of Theology are exempted from the qualifying examination.

(ii) DOCTORATE

D.Phil.: minimum 2 years' study (except that for a candidate who has passed the examination for the degree of B.Phil. the minimum is 1 year). The D.Phil. is a higher research degree in Arts or Science presupposing preliminary training in research methods or

outstanding ability and requiring that the candidate's work should result in an original contribution to knowledge deserving publication. Candidates are normally required to have either the Oxford B.Litt. or B.Sc. or to have served an apprenticeship in research about equal to that implied by those degrees. Graduates of other universities may be admitted to the degree.

(iii) SENIOR DOCTORATES

The following degrees are open to Oxford graduates of some years' standing.

D.Litt. and D.Sc.: awarded for published work, constituting an original contribution to the advancement of learning.

D.Mus.: awarded for a musical work or works of outstanding merit.

D.C.L.: awarded for published work forming a substantial contribution to legal learning.

D.D.: awarded for a thesis or published work in some branch of Theology.

(iv) HIGHER MEDICAL DEGREES

M.Ch.: candidates must pass a written or practical examination on the principles and practice of surgery and must submit a thesis on an approved subject connected with surgery.

D.M.: awarded for a thesis or published work on an approved subject connected with medicine.

DIPLOMAS AWARDED

(i) DIPLOMAS CONFINED TO MEMBERS OF THE UNIVERSITY

Diploma in Advanced Mathematics: usually 2 years.

Diploma in Agricultural Economics: 1 year.

Diploma in Classical or European Archaeology: 1 year.

Diploma in Economic Development: 1 year.

Diploma in the History of Art: 1 year.

Diploma in the History and Philosophy of Science: 1 year.

Diploma in Celtic Studies: usually 2 years.

Diploma in Geochemistry: 1 year.

Diploma in Law: 1 year.

Diploma in Slavonic Studies: 1 year.

Diploma in Soil Science: 1 year.

Diploma in Statistics: 1 year.

Diploma in Theology: 1 year.

(ii) DIPLOMAS NOT CONFINED TO MEMBERS OF THE UNIVERSITY

Diploma in Anthropology: 1 year.

Diploma in Education: 1 year for graduates intending to become teachers.

Diploma in Economics and Political Science: 1 year.

Diploma in Prehistoric Archaeology: 1 year.

Diploma in Social and Administrative Studies: 1 year.

Diploma in Forestry: 1 year.

Diploma in Comparative Philology: 1 year.

CERTIFICATES AWARDED

Certificate in Physical Anthropology.

Certificate in Cultural Anthropology.

Certificate in Fine Art: usually 4 years.

Certificate in Management Studies: the courses for the Certificate and for the **B.Phil. in Management Studies** will be conducted by the Oxford Centre for Management Studies, a new organisation in the process of establishment. The Certificate course is designed for experienced candidates between the ages of 30 and 40.

UNIVERSITY OF READING

Reading, Berkshire
(Abbreviation: Rdg.)

FIRST DEGREES

(i) FIRST DEGREES IN ARTS

B.A. Honours (Single Subject): 3 (or 4 in cases marked with an asterisk (*)) years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Pass.

Language courses (marked with an asterisk (*)) include one year spent abroad. Courses are available in the following subjects:

Classics; Economics; English Language and Literature; Fine Art (a 4-year course); French*; Geography; German*; Greek; History; Italian*; Latin; Mathematics; Music; Philosophy; Psychology; Sociology.

B.A. Honours (Combined Subject): 3 (or 4 in cases marked with an asterisk (*)) years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Pass.

Language courses (marked with an asterisk (*)) include one year spent abroad. Courses are available in the following subjects

Economics and Psychology; Economics and Sociology; English Literature and French; English Literature and German; French and Economics*; French and German*; French and Italian*; French and Politics; French and Sociology; Geography and Sociology; German and Economics*; German and French*; German and Italian*; Greek and English Literature; History and Sociology; Italian and French*; Latin, Ancient History and Mediaeval History; Latin and English Literature; Latin and French*; Latin and German*; Latin and Italian*; Latin and Mediaeval Studies; Modern History and Philosophy; Modern History and Politics; Music and English Literature; Music and German; Philosophy and English Literature; Philosophy and German; Philosophy and Politics; Politics and Economics; Sociology and Politics.

(ii) FIRST DEGREES IN SCIENCE AND AGRICULTURE

B.Sc. General Honours: 3 years. Classification of Honours: 1st Class, 2nd Class, 3rd Class or Pass.

Candidates follow three subjects from among those offered for the B.Sc. Special degree.

B.Sc. Special Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Pass.

Courses are available in the following subjects:

Applied Electricity; Applied Mechanics; Botany; Cybernetics; Chemistry; Geography; Geology; Mathematics; Meteorology; Microbiology; Physics; Physical Properties of Materials; Physiological Chemistry; Psychology; Zoology.

B.Sc. Honours in Agriculture: 3 years (candidates may be required to take a 4-year course if they are not given total exemption

from the Intermediate examination). Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class.

Courses are available in the following subjects:

Agriculture; Agricultural Botany; Agricultural Economics;
Animal Nutrition; Food Science; Horticultural Botany;
Horticultural Science; Soil Science; Dairying.

B.Sc. Pass in Agriculture: 3 years. Classification of Award: Divisions I, II or III.

Courses are available in Agriculture, Horticulture, and Dairying.

HIGHER DEGREES

(i) MASTERS' DEGREES

M.A.; M.Sc.: 2 years from first degree.

M.A. (Faculty of Letters): 2-year course of instruction in either Mediaeval Symbolism and Iconography or the Gothic Revival in Europe, 1750-1830.

M.Agr.Sc. (Master of Agricultural Science): 2-year course of instruction in either Agriculture (in one of five sections), Avian Physiology and Nutrition, Soil Science, or Agricultural Economics; awarded on examination.

M.Ed.: either 2 years (1 full-time, 1 part-time) or 3 years part-time; course of instruction for graduate serving teachers holding a Diploma in Education or Certificate in Education from a British university with at least 2 years' teaching experience.

(ii) DOCTORATES

Ph.D.; D.Litt.; D.Sc.

HONORARY DEGREES

M.A.; M.Sc.; D.Litt.; D.Sc.

DIPLOMAS AWARDED

Diploma in Rural Education (in abeyance); 1 year full-time or 2 years part-time for serving teachers.

Diploma in Education: 1 year for graduates intending to become teachers.

Diploma in Agricultural Economics: 1 year postgraduate.

Diploma in Fine Art (course closed): 3 years.

Diploma in Technical Physics: 1 year postgraduate.

THE ROYAL COLLEGE OF ADVANCED TECHNOLOGY, SALFORD

(proposed University of Salford)
Salford, 5, Lancashire

Undergraduate courses formerly led to the Associateship of the College or to the Diploma in Technology; postgraduate courses formerly led to the Fellowship of the College (**F.R.C.A.T.S.**) or to the **Membership of the College of Technologists**.

FIRST DEGREES

(i) FIRST DEGREES IN ARTS AND SOCIAL STUDIES

B.Sc. Ordinary in Modern Languages: 3 years (including a period of study abroad).

B.Sc. Honours in Modern Languages: 4 years (including a period of study abroad). In both the Ordinary and Honours degree courses students take two main languages and one subsidiary. The main languages are:

French; German; Italian; Russian; Spanish.

The subsidiary languages are:

French; German; Italian; Dutch; Polish; Spanish.

B.Sc. Honours in Social Studies: 3 years. For the Final Examination students must choose two subjects from among:

Economics; Geography; Politics; Sociology; Social Anthropology.

B.Sc. Honours in Business Operation and Control: 4 years sandwich. For the Final Examination students take courses in:

Mathematics; Operations Research; Economics; Management Accounting; Industrial Administration; Industrial Relations.

(ii) FIRST DEGREES IN SCIENCE AND ENGINEERING

B.Sc. Honours: 3 years. Courses are available in the following subjects:

Chemistry; Electrical Engineering Science; Electronics; Physics.

B.Sc. Joint Honours in Science: 3 years. For the Final Examination students must choose two subjects from among:

Botany; either Biological Chemistry or Chemistry; Economics (from 1967-68 onwards); either Mathematics with Applied Mathematics or Mathematics with Statistics; Physics; Physiology; Zoology.

B.Sc. Honours: 4 years sandwich. Courses are available in the following subjects:

Aeronautical Engineering; Applied Biology; Applied Chemistry; Applied Physics; Chemical Engineering; Civil Engineering; Electrical Engineering; Engineering Metallurgy; Mathematics (courses in Mathematics; or Mathematics and Statistics; or Mathematics and Numerical Analysis); Mechanical Engineering.

HIGHER DEGREES

M.Sc.: courses, lasting at least 1 year, are available in:

Advanced Organic Chemistry; Control Engineering; High Voltage Direct Current Power Transmission; Materials Science; Radiological Health and Safety; Management.

Ph.D.: the College expects to be able to accept candidates for the degree of Ph.D. during the session 1965-66.

DIPLOMA AWARDED

Diploma for Advanced Studies: awarded to postgraduate students who successfully complete full-time courses lasting at least six months. Candidates must be graduates, or have a Dip.Tech. or H.N.C. or other acceptable qualifications. Courses are at present available in:

Management Studies; Production Engineering Technology.

OTHER QUALIFICATIONS AWARDED

(i) AWARDS OF THE ROYAL COLLEGE OF ADVANCED TECHNOLOGY, SALFORD

Ordinary Associateship (Assoc.R.C.A.T.S.): courses are available in:

Civil and Structural Engineering (3 years full-time); Public Health (3 years sandwich).

Honours Associateship (Hons.Assoc.R.C.A.T.S.): courses are available in:

Chemistry (5 years part-time); Pure Chemistry and Graduateship of the Royal Institute of Chemistry (5 years

part-time); General Science (5 years part-time); Gas Engineering (4 years sandwich); Mathematics (5 years part-time).

Licentiateship: a course is available in Aeronautical Engineering (4 years part-time).

(ii) COURSES IN PRÉPARATION FOR PROFESSIONAL QUALIFICATIONS

Licentiateship of the Royal Institute of Chemistry: 1 year part-time.

Graduateship of the Royal Institute of Chemistry (and Hons.Assoc.R.C.A.T.S.): 5 years part-time.

Quantity Surveying (examinations of the Royal Institution of Chartered Surveyors and the Institute of Quantity Surveyors): 3 years, 1 year part-time.

Institution of Electrical Engineers, Part III: 8 months full-time, 3 years part-time.

Public Health (examinations of the Royal Society of Health and the Public Health Inspectors' Education Board): 2 years part-time.

Graduateship of the Institute of Physics, Part II: 1 year full-time.

Graduateship of the Institute of Physics, Parts I and II: 3 years part-time.

(iii) OTHER COURSES

B.Sc. Special in Physics (External London): 5 years part-time.

H.N.C. in Chemical Engineering: 3 years part-time and a further year for Endorsement.

H.N.C. in Applied Biology: 2 years part-time.

Diploma in Mathematics (Technology) of the Mathematical Association in Numerical Analysis and Statistics: 3 years part-time.

Advanced Diploma in Mathematics (Technology) of the Mathematical Association in Numerical Analysis and Statistics: 2 years part-time.

UNIVERSITY OF ST. ANDREWS

St. Andrews, Fife

The University of St. Andrews consists of three societies of teachers and students, St. Mary's and St. Salvator's Colleges, St. Andrew's, and Queen's College, Dundee. Courses in Divinity may be taken only in St. Mary's College; courses in Arts may be taken only in St. Salvator's College; courses in Social Science and Law may be taken only in Queen's College; but courses in Pure Science and Medicine may be taken at St. Salvator's and Queen's Colleges. Courses in Applied Science may be taken only in Queen's College.

FIRST DEGREES

(i) FIRST DEGREES IN ARTS

M.A. Ordinary: 3 years. Students must choose one group of subjects from among the 28 groups available.

M.A. Honours: 4 years. Classification of Honours: 1st Class, 2nd Class, 3rd Class or Ordinary.

The degree may be taken in a single subject or in a group of subjects. The single subjects are:

Arabic Studies; English Language and Literature; French Language and Literature; German Language and Literature; Hispanic Languages and Literature; Mediaeval and Modern History; Mediaeval History; Modern History; Modern Russian Studies.

The groups are:

Applied Mathematics with Mathematics or Physics; Arabic with another Language; Astronomy with Mathematics; Chemistry with Mathematics; English with French or German or Greek or Logic and Metaphysics or Mediaeval History or Modern History or Moral Philosophy or Spanish; French with Arabic or English or German or Spanish; Geography with Mediaeval History or Modern History or Political Economy; German with another Language; Greek with English or Hebrew or Latin or Logic and Metaphysics or Moral Philosophy; Hebrew with Arabic or Greek or Semitic Languages; Latin with Greek; Logic and Metaphysics with English or Greek or Mathematics or Moral Philosophy or Physics or Political Economy; Mathematics with Applied Mathematics or Astronomy or Chemistry or Logic and Metaphysics or

Physics or Political Economy or Statistics; Mediaeval History with English or Geography or Moral Philosophy or Political Economy; Modern History with English or Geography or Moral Philosophy or Political Economy; Moral Philosophy with English or Greek or Logic and Metaphysics or Mediaeval History or Modern History or Political Economy; Physics with Applied Mathematics or Logic and Metaphysics or Mathematics; Political Economy with Geography or Logic and Metaphysics or Mathematics or Mediaeval History or Modern History or Moral Philosophy; Semitic Languages with Arabic or Hebrew; Spanish with Arabic or English or French or German; Statistics with Mathematics.

The degree of M.A. may also be taken as an Ordinary degree or a degree with Honours in the Faculty of Social Science. The Honours degree may be taken in Economics, Geography, Mathematics with Economics or Psychology, or Statistics with Economics or Geography or Psychology or in any two of the following: Economics, Geography, Modern Social and Economic History, Philosophy, Political Science, and Psychology.

B.D. Ordinary: 4 years.

LL.B.: 3 years. Classification of Award: the degree may be awarded with Distinction to candidates who have shown exceptional merit in their examinations.

M.A. and LL.B.: 5 years. Classification of Award: Ordinary. Students may combine the course of M.A. Ordinary in Arts or Social Science with that of LL.B. and start working for both degrees from the date of their matriculation.

(ii) FIRST DEGREES IN SCIENCE AND TECHNOLOGY

B.Sc. Ordinary: 3 years. Courses are available in the following subjects:

Pure Science

Anatomy; Applied Mathematics; Biochemistry; Botany; Chemistry; Geology; Mathematics; Microbiology; Pharmacology; Physics; Physiology; Statistics; Zoology.

Applied Science

Engineering; Civil Engineering; Electrical Engineering; Mechanical Engineering.

B.Sc. Honours: 4 years. Classification of Honours: Pure Science—1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Ordinary. Applied Science—1st Class, 2nd Class, 3rd Class or Ordinary.

Courses are available in the following subjects:

Pure Science

Anatomy; Applied Mathematics; Astronomy; Astronomy and Mathematics; Astronomy and Applied Mathematics; Astronomy and Physics; Biochemistry; Botany; Chemistry; Geology; Mathematics; Mathematics and Applied Mathematics; Mathematics and Statistics; Microbiology; Pharmacology; Physics; Physics and Theoretical Physics; Physiology; Zoology.

Applied Science

Civil Engineering; Electrical Engineering; Electronic Physics; General Engineering; Mechanical Engineering.

(iii) FIRST DEGREES IN MEDICINE

M.B., Ch.B.: 6 years. Classification of Award: the degree may be awarded 'with Honours' and 'with Commendation'. High passes in individual subjects may be recorded in the pass lists as 'with merit'.

B.D.S.: 3 years.

HIGHER DEGREES

(i) MASTERS' AND EQUIVALENT DEGREES

Ed.B.: 2 years. The degree may be awarded with Honours in three classes.

B.D. Honours: 3 years. There are three grades of Honours, 1st Class, 2nd Class and 3rd Class.

B.Phil.: by dissertation at least 4 years after M.A.

B.Litt.: by examination, either conjointly with or after M.A. Honours.

Candidates must take an examination in not less than three of the following:

Greek; Latin; Hebrew; English; French; German; Spanish; Arabic; Logic and Metaphysics; Psychology; Moral Philosophy; Political Economy or Economics; Political Science; History, Mediaeval or Modern or Modern Social and Economic; Mathematics.

M.Sc.: by thesis at least 4 terms after first degree.

M.Th.: by thesis for B.D.'s 4 years after graduation and after a 4-term full-time or an 8-term part-time course.

(ii) DOCTORATES

Ph.D.: at least 3 years' study and research.

LL.D.: for written work submitted 7 years after graduation.

D.Litt.: for written work submitted 7 years after graduation.

D.Sc.: for written work submitted 7 years (5 years in Applied Science) after graduation.

(iii) HIGHER MEDICAL DEGREES

Ch.M.: for research work submitted at least 1 year after M.B., Ch.B.; candidates must be St. Andrews graduates or members of staff and at least 24.

M.D.: for research work submitted at least 1 year after M.B., Ch.B.; candidates must be St. Andrews graduates or members of staff and at least 24.

M.D.S.: by examination and thesis at least 2 years after B.D.S.; candidates must be St. Andrews graduates or members of staff.

D.D.Sc.: for research work submitted at least 5 years after first dental qualification; candidates must be St. Andrews graduates or members of staff.

HONORARY DEGREES

LL.D.; D.D.; D.Sc.

DIPLOMAS AWARDED

Diploma in Education (Dip.Ed.): for graduates who complete the first year (Diploma Stage) of the Ed.B. course.

Diploma in Social Administration: at least 1 year for graduates.

Diploma in Public Health (D.P.H.): a 1-year course which may not be taken until 2 years after professional qualification.

Diploma in Industrial Health (D.I.H.): a 1-year course which may not be taken until 2 years after professional qualification.

Diploma in Public Dentistry (D.P.D.): a 1-year course which may not be taken until 2 years after professional qualification.

CERTIFICATES AWARDED

Licentiate in Theology (Lic.Theol.): a 3-year non-graduate course,

Certificate in Social Administration: a 2-year non-graduate course.

Certificate in Industrial Health: 1 term postgraduate for students who do not wish to take the complete course for the Diploma in Industrial Health.

UNIVERSITY OF SHEFFIELD

Sheffield, 10, Yorkshire
(Abbreviation: Sheff.)

FIRST DEGREES

(i) FIRST DEGREES IN ARTS

B.A. General: 3 years. Classification of Award: the following Honours may be awarded under certain conditions: 1st Class Honours, 2nd Class Honours, Pass—Divisions 1 or 2.

Candidates take three subjects in the Final Examination chosen from among the following:

Greek; Greek Literature; Latin; English; French; Spanish;
German; Ancient History; Modern History; Philosophy;
Economics; Mathematics; Education; Architecture;
Geography; Music; Biblical History and Literature;
Psychology; European Prehistory; Economic History.

B.A. Special Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class.

Courses are available in the following subjects:

Ancient History and Biblical History and Literature; Architecture (5 years); Classics; English Language and Literature; French; Geography; German; Greek; Greek and Biblical History and Literature; Greek and English; History; Latin; Latin and Biblical History and Literature; Latin and English; Latin and French; Latin and Spanish; Mathematics and Philosophy; Mathematics, Pure and Applied; Modern History and Government; Modern Languages; Music; Philosophy; Philosophy and Biblical History and Literature; Philosophy and a language; Philosophy and Psychology; Psychology; Spanish.

B.Mus.: 3 years.

B.A. with B.Mus.: 4 years. Students who have taken the B.A. General degree may proceed to the degree of B.Mus. if they pass the various examinations in Music and follow an approved course in Music, part of which may be taken in the course for B.A.

B.Arch. Honours: 5 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class.

Candidates who fail the Final Examinations for either the B.A. in Architecture or the B.Arch. may be allowed to complete the requirements for the Diploma in Architecture in a subsequent year and examination.

B.A.(Econ.) General: 3 years. Classification of Award: the following Honours may be awarded under certain conditions: 1st Class Honours, 2nd Class Honours, Pass—Divisions 1 or 2. Students follow three subjects from among most of those available for the Special degree.

B.A.(Econ.) Special Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Pass. Students are required to choose one subject, two subjects or three subjects at the end of their first year. The following courses are available:

Single Subjects

Accountancy and Financial Administration; Economic History; Economics; Economics with Mathematics and Statistics; Geography; Political Theory and Institutions; Psychology; Sociology.

Dual Subjects

Economic History and Geography; Economics, Accountancy and Financial Administration; Economics and Business Studies; Economics and Economic History; Economics and Geography; Economics and Philosophy; Economics, Political Theory and Institutions; Economics and Sociology; Pure Mathematics and Statistics; Philosophy, Political Theory and Institutions; Philosophy and Psychology; Sociology and Economic History; Sociology and Geography; Sociology and Philosophy; Sociology, Political Theory and Institutions; Sociology and Psychology.

Triple Subjects

Economic History, Sociology and Geography; Economics, Accountancy and Financial Administration, Law; Economics, Business Studies, Accountancy and Financial Administration; Economics, Modern History, Political Theory and Institutions; Economics, Pure Mathematics and Statistics; Economics, Political Theory and Institutions, Geography; Geography, Pure Mathematics and Statistics; Economics, Sociology and Geography; Psychology, Pure Mathematics and Statistics; Sociology, Economics and Economic History; Sociology, Pure Mathematics and Statistics; Sociology, Political Theory and Institutions, Modern History; Sociology, Political Theory and Institutions, Philosophy; Sociology, Psychology and Philosophy.

LL.B. Ordinary: 3 years. Students are selected to read for the Ordinary degree or the Honours degree in the light of their performance in Part I of the Final Examination.

LL.B. Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Ordinary.

B.Jur. Ordinary (Bachelor of Jurisprudence): 3 years. Students are selected to read for the Ordinary degree or the Honours degree in the light of their performance in the first of two examinations for Finals.

B.Jur. Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Ordinary.

B.Ed. (introduced 1965): the degree of B.Ed. is to be conferred on selected students who have completed the three-year course in colleges of education which are constituent members of the University Institute of Education and who have attained the required standard in two advanced main level subjects.

(ii) FIRST DEGREES IN SCIENCE AND TECHNOLOGY

B.Sc. General: 3 years. Classification of Award: Pass—Divisions 1 or 2.

Students take three subjects in the Final Examination.

B.Sc. General Honours: 3 years. Classification of Honours: 1st Class, 2nd Class or General.

Students take two subjects at an advanced level for the Final Examination chosen from among the following:

Mathematics; Physics; Chemistry; Zoology; Botany; Physiology; Geology; Geography; Statistics.

B.Sc. Special Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Pass.

Courses are available in the following subjects:

Biochemistry; Botany; Chemistry; Genetics and Microbiology; Geography; Geology; Human Biology and Anatomy; Mathematics; Physics; Physiology; Psychology; Zoology.

B.Sc.Tech. Ordinary: 3 years. Classification of Award: Divisions 1 or 2.

Students are selected to read for the Ordinary degree in the light of their performance in the first of two examinations for Finals.

Courses are available in the following subjects:

Fuel Technology and Chemical Engineering; Glass Technology; Ceramics with Refractories Technology.

B.Sc.Tech. Honours: 3 years. Classification of Honours: Fuel Technology: 1st Class, 2nd Class (Divs 1 or 2) or Ordinary. Others: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Ordinary.

The following courses are available:

Fuel Technology and Chemical Engineering; Glass Technology; Ceramics with Refractories Technology; Materials Technology.

B.Eng. Ordinary: 3 years. Classification of Award: Divisions 1 or 2.

Students are transferred to Ordinary degree courses in the light of their performance in the First Examination for Finals. Courses are available in:

Civil Engineering; Electronic Engineering; Electrical Engineering; Mechanical Engineering; Mining; Structural Engineering; Engineering with Business Studies.

B.Eng. Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2) or Ordinary.

Courses are available in the following subjects:

Civil Engineering; Electronic Engineering; Electrical Engineering; Mechanical Engineering; Mining; Structural Engineering; Engineering with Business Studies.

B.Met. Ordinary: 3 years. Classification of Award: Divisions 1 or 2.

B.Met. Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Ordinary.

(iii) FIRST DEGREES IN MEDICINE

M.B., Ch.B.: 5 or 6 years according to student's entry qualifications. Classification of Award: the degrees may be awarded with Honours.

B.D.S.: 4 or 5 years according to student's entry qualifications. Classification of Award: the degree may be conferred as an Ordinary degree or a degree with Honours.

HIGHER DEGREES

(i) MASTERS' DEGREES

LL.M.; M.A.; M.A.(Econ.); M.Sc.; M.Eng.; M.Met.; M.Sc.-Tech.

These degrees are awarded to:

(i) Sheffield graduates of not less than 1 year's standing, holding approved degrees in the Faculties concerned; a thesis with oral and written examinations if required (together with attendance at courses as needed) are called for. Attendance is required as follows:

LL.M.: 1 year for LL.B.'s of 1 year's standing.

M.A. and M.A.(Econ.): such courses as the Faculty concerned may prescribe for candidates who hold a bachelor's degree without honours.

M.Sc.: 3 consecutive terms for Honours B.Sc.'s of less than 2 years' standing; 6 consecutive terms under certain conditions for B.Sc.'s without Honours.

M.Eng.: 3 consecutive terms for B.Eng.'s of less than 2 years' standing and experience in the science or practice of engineering.

M.Met.: not less than 3 terms' research in the Department of Metallurgy for B.Met.'s of less than 3 years' standing and experience in the science or practice of metallurgy.

M.Sc.Tech. in Fuel or Glass or Refractories Technology: 3 consecutive terms for B.Sc.Tech.'s of less than 3 (Fuel Technology 2) years' standing and experience in the science or practice of technology.

These degrees may also be taken by Sheffield graduates by written and, if required, oral examination (and submission of a dissertation in the case of technology subjects), after attending approved courses of not less than 1 year.

(ii) non-Sheffield graduates, graduates of other Sheffield Faculties and (except for LL.M.) certain other persons with approved qualifications after attending courses varying from 1 to 3 years.

The degree of M.Sc. in Education is a five-year part-time course.

(iii) (M.Eng., M.Met., M.Sc. and M.Sc.Tech. only) appropriately qualified full-time members of staff of the affiliated technical colleges by presentation of a thesis after 3 years' approved research in the affiliated institution under University supervision.

(ii) DOCTORATES

Ph.D.: in all Faculties; awarded after a 2- or 3-year course to graduates and others holding approved qualifications; in the Faculties of Arts, Law and Economic and Social Studies to graduates only after 4 years' part-time study.

LL.D.: for distinction in research or learning in law, for Sheffield graduates of 4 years' standing.

D.Mus., by composition (or thesis) and examination, **D.Eng., D.Met., D.Sc.Tech.:** for distinction by substantial contributions to learning, for Sheffield graduates of 6 years' standing.

Litt.D., Litt.D.(Econ.) (Doctor of Letters in Economic Studies): for distinction by contribution to learning, for Sheffield graduates (Litt.D. for M.A.'s of 7 years' standing; Litt.D.(Econ.) for M.A.(Econ.)'s of 5 years' standing).

D.Sc.: for distinction in published original research, for Sheffield B.Sc.'s of 6 years' standing and B.Sc.'s of other universities who are also Sheffield M.Sc.'s or Ph.D.'s of 6 years' standing.

(iii) HIGHER MEDICAL DEGREES

M.D.; M.D.S.; Ch.M.: for Sheffield graduates only.

M.D.: by thesis and examination, if required.

M.D.S.: by thesis or examination for graduates of 2 years' standing.

Ch.M.: by examination, for graduates of 3 years' standing.

HONORARY DEGREES

M.A.; M.Sc.; Ph.D.; LL.D.; D.Eng.; D.Sc.; Litt.D.; M.Sc.Tech.; D.Met.; D.Sc.Tech.

DIPLOMAS AND ASSOCIATESHIPS AWARDED

(i) NON-GRADUATE

Diploma in Architecture (Dip.Arch.): may be awarded with Distinction; 5 years, including an approved period in an architect's office.

Associateship in Fuel Technology and Chemical Engineering (A.F.C.E.); Associateship in Glass Technology (A.Glass Technol.); Associateship in Metallurgy (A.Met.): associateships are awarded after a year's course to persons with appropriate qualifications (such as H.N.C. in Chemistry, Applied Physics or Mechanical Engineering).

(ii) POSTGRADUATE

Diploma in Education (Dip.Educ.): 1 year for graduates intending to become teachers.

Diploma in Microbiology (Dip.Microbiol.): 1 year.

Diploma in Public Health (D.P.H.): 18 months part-time.

Diploma in Applied Mechanics (Dip.A.M.): 1 year.

Diploma in Librarianship: at least 1 year for graduates or persons with approved qualifications, and with 1 year's approved experience.

Diploma in Mining: 1 year full-time or equivalent part-time.

Diploma in Business Studies: 1 year.

Diploma in Glass Technology: 1 year.

Diploma in Physical Metallurgy: 1 year.

Diploma in Social Studies: 1 or 2 years.

CERTIFICATES AWARDED

Certificate in Architecture: 3 years.

Certificate in Professional Practice in Architecture: examination after 1 year's professional practice following degree or diploma.

Advanced Certificate in Education (Primary): 2 years part-time and 1 term full-time for experienced qualified teachers.

Advanced Certificate in Education: 3 years part-time for experienced qualified teachers.

Certificate in Education: 3 years full-time for students in the colleges of education in the University Institute of Education.

Certificate in Biblical History and Literature: 2 years' evening study.

Licentiate in Dental Surgery (L.D.S.): 5 years; may also be awarded to candidates who fail the Final Examination for the degree of B.D.S. but who reach a high enough standard to merit the award of L.D.S.

UNIVERSITY OF SOUTHAMPTON

Highfield, Southampton
(Abbreviation: S'ton)

FIRST DEGREES

(i) FIRST DEGREES IN ARTS AND SOCIAL SCIENCES

B.A. Honours (Single Subject): 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Pass.

All students are candidates for Honours but those who fail to obtain Honours may be awarded a pass degree. All degrees, except B.A. in French and some combinations with French, are awarded after a three-year course, provided that certain entrance requirements are met; B.A. Honours in French requires four years of study, the third year being spent in France. Four years' study instead of three is permissive in Spanish, the third year being spent in Spain.

Courses are available in the following subjects:

Classics; English; French; Geography; German; Greek;
History; Latin; Mathematics; Music; Philosophy; Spanish.

B.A. Honours (Combined Studies): 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Pass.

Courses are available in the following combinations of subjects:

English and French or German; English and Greek; English
and Latin; English and History; English and Music;

English and Philosophy; English and Spanish; French and German; French and Latin; French with History; French and Music; French and Spanish; French and Philosophy; Geography and History; German and Greek; German and Latin; German and Philosophy; German with History; German and Music; German and Spanish; Greek and Philosophy; Greek and Theology; History and Theology; Latin and Theology; Latin and Philosophy; Modern History with Politics and Economics; History and Philosophy; Latin and Spanish; Latin and Mediaeval History; Music with Modern History; Music and Spanish; Philosophy and Politics; Philosophy and Pure Mathematics; Philosophy and Theology; Spanish with History; Spanish with History and Portuguese.

LL.B. Pass or Honours: 3 years. Classification of Award: 1st Class Honours, 2nd Class Honours (Divs 1 or 2) or Pass.

B.Sc.(Soc.Sci.) (Social Sciences) Pass or Honours: 3 years. Classification of Award: 1st Class Honours, 2nd Class Honours (Divs 1 or 2) or Pass.

Except in the cases of Economics and Psychology, students take two subjects chosen from among the following:

Accountancy; Commerce; Economics; Politics; Psychology; Sociology; Statistics.

Candidates take one subject in addition to the main subject and present a dissertation.

(ii) FIRST DEGREES IN SCIENCE AND TECHNOLOGY

B.Sc. Ordinary: 3 years. Classification of Award: Divisions 1 or 2. Entry to the course is only from the first year of the B.Sc. Honours course. Students take two subjects together with History and Methods of Science.

B.Sc. Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Pass.

Courses are available in the following subjects:

Botany; Botany and Geography; Chemistry; Electronics; Geography; Geology; Mathematics; Mathematics with Aeronautics; Mathematics with Electronics; Physics; Physiology and Biochemistry; Zoology.

B.Sc.(Eng.) Ordinary: 3 years. Classification of Award: the degree may be awarded with a mark of distinction.

Ordinary courses are entered after Part I of the degree examination and are available in the following subjects:

Aeronautical Engineering; Civil Engineering; Electrical Engineering; Electronic Engineering; Engineering Science; Mathematics; Mechanical Engineering.

B.Sc.(Eng.) Honours: 3 years (the course may include a year in industry between the 2nd and 3rd years). Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Pass.

Courses are available in the following subjects:

Aeronautical Engineering; Civil Engineering; Electrical Engineering; Electronic Engineering; Engineering Science; Mathematics; Mechanical Engineering.

HIGHER DEGREES

(i) MASTERS' DEGREES

M.A.; M.Sc.; M.Sc.(Eng.); M.Sc.(Soc.Sci.); M.A.(Ed.); LL.M.

These degrees are open to Southampton and other graduates. The degrees of M.A.(Ed.), M.Sc., M.Sc.(Eng.) are also open to non-graduates on certain conditions and with special approval.

The degree of M.Sc. may, with permission, be taken by graduates after a further three months' study following the Diploma course in Electronics or in Numerical Analysis and Automatic Computing.

The degree of M.Sc.(Eng.) may be taken after a course of not less than 12 months in Applied Mathematics, Pure Mathematics, Oceanography, Vibration and Noise Studies, High Temperature Gas Dynamics and Gas Physics and in Advanced Structural Engineering.

Masters' degrees may, with permission, be taken on a part-time basis by graduates, but not by non-graduates.

(ii) DOCTORATES

Ph.D.: 2 years, open to Southampton and other graduates and to non-graduates on certain conditions and with special approval; may be taken part-time by graduates, but not by non-graduates.

D.Litt.; D.Sc.; D.Sc.(Soc.Sci.); LL.D.

These degrees may be awarded to Southampton graduates six years after their first graduation.

HONORARY DEGREES

LL.D.; D.Litt.; D.Sc.

DIPLOMAS AWARDED

Postgraduate Diploma in Social Studies or Diploma in Applied Social Studies: 1 calendar year postgraduate. (Students who have obtained the Diploma in Applied Social Studies may undertake a further four months' course in Mental Health, the satisfactory completion of which is separately recorded.)

Diplomas of the University of Southampton (D.U.S.):

Electronics: 1 year full-time postgraduate.

Numerical Analysis and Automatic Computing: 1 year postgraduate.

Advanced Acoustics, Vibration and Noise Studies: 1 calendar year postgraduate.

High Temperature Gas Dynamics and Gas Physics: 1 year postgraduate.

Advanced Structural Engineering: 1 calendar year postgraduate.

Irrigation and Land Drainage Engineering: 1 year full-time postgraduate.

Diploma in Public Administration: 2 years (part-time courses arranged for local government officers).

Diploma in Education: 3 years part-time for qualified teachers.

Art Teacher's Diploma: 1 year.

Diploma in the Education of Handicapped Children: 1 year full-time for qualified teachers.

CERTIFICATES AWARDED

Certificate in Social Studies: 2 years.

Certificate in Education: 1 year for graduates intending to become teachers.

Health Visitor's Certificate: the University offers, in co-operation with the public health authorities of the surrounding area, a 1-year course leading to the examination for the Health Visitor's Certificate of the Royal Society of Health.

Integrated Nurse/Health Visitor Training: a 4-year 9-month course organised jointly by the University and the Nightingale Training School at St. Thomas's Hospital, London. The final qualifications include S.R.N., Part I of the Central Midwives Board examination and the Health Visitor's Certificate of the Royal Society of Health.

UNIVERSITY OF STRATHCLYDE

George Street, Glasgow, C.1, Scotland
(Abbreviation: Strath.)

The University, which received the Royal Charter in June 1964, was formed by the amalgamation of the Royal College of Science and Technology, Glasgow, and the Scottish College of Commerce, Glasgow. Details of Honours classifications were not available at time of writing.

FIRST DEGREES

(i) FIRST DEGREES IN ARTS AND SOCIAL STUDIES

Students are admitted to courses leading to an Ordinary degree; selection for Honours is made in the light of their performance in the first and second years.

B.A. Ordinary: 3 years. Courses are available in the following subjects:

Administration; Politics; Economics; Economic History; Psychology; Sociology; English; Geography; French; German; Spanish.

B.A. Honours: 4 years (students may be exempted from the first year of the course in the light of their entry qualifications).

Courses are available in the same subjects as for the Ordinary degree.

B.Arch. Honours: 5 years.

(ii) FIRST DEGREES IN BUSINESS AND ADMINISTRATION

Students are admitted to courses leading to an Ordinary degree; selection for Honours is made in the light of their performance in their first and second years.

B.A. Ordinary: 3 years. Courses are available in the following subjects:

Administration; Industrial Administration; Public Administration; Social Administration; Personnel Administration; Industrial Relations; Commerce; Business Economics; Marketing; Accountancy; Law; Secretarial Science.

B.A. Honours: 4 years (students may be exempted from the first year of the course in the light of their entry qualifications).

Courses are available in the same subjects as for the Ordinary degree.

B.Sc. in Hotel Management: 3 years (introduced 1965).

(iii) FIRST DEGREES IN SCIENCE AND TECHNOLOGY

B.Sc. Ordinary: 3 years. Courses are available in Chemistry, Mathematics and Physics.

B.Sc. Honours: 4 years. Courses are available in the following subjects:

Applied Biology; Applied Chemistry; Biochemistry; Biological Science; Metallurgy; Microbiology; Chemistry; Food Science; Pharmacy; Mathematics; Physics; Fibre Science; Chemical Engineering; Civil Engineering; Electrical Engineering; Environmental Control Engineering; Mechanical Engineering; Mining Engineering; Naval Architecture.

ASSOCIATESHIP COURSES

Four-year courses leading to the **Associateship of the Royal College of Science and Technology, Glasgow (A.R.C.S.T.)** are available in the following subjects:

Chemical Engineering; Civil Engineering; Electrical Engineering; Mechanical Engineering; Mining Engineering; Applied Biology; Applied Chemistry; Applied Physics; Building; Ceramics; Chemistry; Food Science; Mathematics; Microbiology; Naval Architecture; Textile Technology.

HIGHER DEGREES

(i) MASTERS' DEGREES

M.Litt.; M.Arch.

M.A.: Courses are offered in the following subjects:

Advanced Applied Economics (1 year); Economic History (1 year); Politics (1 year); Social Survey Methods (1 year).

M.Sc.: Courses are offered in the following subjects:

Pharmaceutical Chemistry (1 or 2 years); Pharmacognosy (1 or 2 years); Pharmacology.

(ii) DOCTORATES

Ph.D.; LL.D.; D.Litt.; D.Sc.

DIPLOMAS AWARDED

Postgraduate Diploma in Advanced Studies of the Royal College of Science and Technology, Glasgow (D.R.C.): 1-year courses are offered in the following subjects:

Applied Biochemistry; Applied Geophysics; Applied Physics; Chemistry; Process Development; Civil Engineering; Electrical Engineering; Environmental Control Engineering and Resource Utilisation; Extraction Metallurgy; Food Science; Mathematics; Mechanical Engineering; Microbiology; Mining Engineering; Mining Geology; Naval Architecture; Pharmaceutical Chemistry; Physical Metallurgy; Polymer Science; Power Engineering; Production Engineering; Structural Engineering; Textile Technology; Town Planning.

Diploma in Architecture: 5 years.

Diploma in Town Planning: 5 terms postgraduate.

Diploma in Management Studies: 4 years part-time.

UNIVERSITY OF SUSSEX

Stanmer House, Stanmer, Brighton, Sussex
(Abbreviation: Sus.)

FIRST DEGREES

(i) FIRST DEGREES IN ARTS

B.A. Honours: 3 years. Courses are available in the following five Schools:

Schools of English and American Studies

Students major in American Studies; or English Literature; or History; or Philosophy.

School of European Studies

Students major in Economics; or English; or French; or Geography; or German; or History; or International Relations; or Philosophy; or Religious Studies; or Russian; or Sociology and Politics. (Students reading French, German or Russian are required to spend their 3rd year abroad in an appropriate country and to take Finals at the end of the 4th year.)

School of Social Studies

Students major in Economics; or Geography; or History; or International Relations; or Mathematics; or Philosophy; or Religious Studies; or Sociology and Politics.

School of African and Asian Studies

Students major in Anthropology; or Economics; or Education; or Geography; or History; or International Relations; or Religious Studies; or Sociology and Politics.

School of Education and Social Work

Students major in English; or Geography; or History; or Philosophy; or Psychology; or Religious Studies; or Sociology.

B.Ed.: 4 years. Courses are available for students in the colleges of education in the area training organisation.

(ii) FIRST DEGREE IN SCIENCE

B.Sc. Honours: 3 years. Courses are available in the following three Schools:

School of Physical Sciences

Students major in Theoretical Chemistry; or Chemistry; or Mathematics; or Mathematical Physics; or Physics; or Philosophy and the Theory of Science.

School of Biological Sciences

Students major in either Biology or Geography.

School of Applied Science and Engineering Science

Students major in Electrical Engineering Science and Electronics; or Mechanical Engineering Science; or Materials Science; or Applied Physics.

HIGHER DEGREES

(i) MASTERS' DEGREES

One-third to half the students completing the B.A. or B.Sc. courses may be accepted for a fourth year of specialist study leading to the degrees of M.A. or M.Sc.

M.A.: 1 year. The following courses are available:

American Studies; Contemporary European Studies; Economic History; Economics; Education; English Literature; French; Geography; German; History; History and

Philosophy of Science; History of Ideas; International Relations; Philosophy; Politics; Russian Studies; Social Anthropology; South Asian Studies.

M.Sc.: 1 year. The following courses are available:

Biological Sciences; Chemistry; Mathematics; Physics;
Philosophy and the Theory of Science; Applied Sciences.

M.Phil.: awarded for research work over at least 1 year.

(ii) DOCTORATES

D.Phil.: 2 years' study after Master's degree.

D.Litt.; D.Sc.: conferred in respect of higher research work.

HONORARY DEGREES

D.Litt.; D.Sc.; LL.D.

DIPLOMAS AWARDED

Diploma in Theoretical Physics: 1 year postgraduate.

Diploma in Experimental Physics: 1 year postgraduate.

Diploma in Organometallic Chemistry: 1 year postgraduate.

Diploma in Social Work: 1 year postgraduate.

Diploma in Educational Technology: under consideration.

CERTIFICATE AWARDED

Certificate in Education: 1 year for graduates intending to become teachers.

UNIVERSITY OF WALES

Cathays Park, Cardiff, Glamorgan
(Abbreviation: Wales)

Constituent Colleges

University College of Wales, Aberystwyth, Cardiganshire.

University College of North Wales, Bangor.

University College of South Wales and Monmouthshire,
Cardiff, Glamorganshire.

University College of Swansea, Swansea.

School of the University

Welsh National School of Medicine, Cardiff.

Associated Theological Colleges and Schools of Theology

United Theological College, Aberystwyth.

Bangor School of Theology.

Cardiff School of Theology.

The Congregational Memorial College, Swansea.

The University prescribes conditions under which it awards first degrees to students of the constituent Colleges and of the Welsh National School of Medicine. Courses leading to the degrees of B.A. and B.Sc. are provided by each of the four Colleges.

NOTES ON ADMISSION TO HONOURS DEGREE COURSES

Aberystwyth

Students are not admitted directly to Honours courses; admission is determined in the light of their progress.

BangorArts

Admission is made at the end of the first year; in the case of Hebrew and Education (four-year courses), admission is made at the end of the second year.

Science

Students with two good G.C.E. 'A' level passes may be admitted to three-year Honours courses, but in general students with only two 'A' level passes or with three or more 'A' level passes in subjects not all appropriate to the proposed degree course are considered for admission to Intermediate courses. With an Intermediate year an Honours degree course takes four years.

Cardiff

Students are initially admitted to courses which are common to Honours and Pass degrees and are selected for Honours or Pass courses at the end of the first year (at the end of the second year in Applied Science).

Swansea

In Arts and Pure Science subjects selection for Honours or Pass degree courses is made at the end of the first year.

FIRST DEGREES

(i) B.A. AND B.SC.

B.A.: 3 years. Classification of Award: the degree may be awarded as a 'Pass' degree; an 'Ordinary' degree; or a 'General' degree with

classified Honours, or with Distinction on combined performance in two subjects in Parts I and II or with Distinction in individual subjects in Part II.

The following courses are available, from which two are chosen:

Aberystwyth

American Studies; Italian or Spanish; Russian; Welsh History; and one from among the subjects offered for B.A. Special (*see below*).

Bangor, Cardiff and Swansea

Two subjects chosen from among those offered for B.A. Honours (*see below*).

B.A. Special, Honours and Joint Honours: 3 years. Classification of Award: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class.

The following courses are available at each of the constituent colleges, except where otherwise indicated:

Special or Honours

Archaeology (Cardiff only); Biblical Studies (Bangor and Cardiff); Economics; Education (Aberystwyth, Bangor and Cardiff); English; French; Geography (Aberystwyth and Swansea); German; Greek; Hebrew (Bangor and Cardiff); Hispanic Studies (Cardiff only); History; Latin; Mathematics (Cardiff and Swansea); Music (Aberystwyth, Bangor and Cardiff); Philosophy; Politics (Aberystwyth and Swansea); Psychology (Bangor and Cardiff); Welsh.

Joint Honours

Classics; Biblical Studies and Philosophy (Bangor only); Economics and Politics (Swansea only); Economics and Russian Studies (Swansea only); English and History (Bangor only); English and Philosophy (Bangor only); English and Russian (Swansea only); French and German (Bangor and Swansea); French and Italian (Swansea only); French and Russian (Swansea only); German and Russian (Swansea only); Latin and English (Swansea only); Mathematics, Modern History and Russian Studies, Modern History and Economics, Modern History and Philosophy, Modern History and Politics, Philosophy and Economics, Philosophy and Politics (Swansea only); Philosophy and Psychology (Bangor and Cardiff); Philosophy and Pure Mathematics (Cardiff only); Politics and

Russian Studies (Swansea only); Pure and Applied Mathematics (Bangor only); Spanish and German (Cardiff only); Welsh and Welsh History (Cardiff only).

B.Sc.: 3 years. Classification of Award: the degree may be awarded as a 'Pass' degree; an 'Ordinary' degree; or a 'General' degree with classified Honours, or with Distinction on the combined performance in Parts I and II or with Distinction in individual subjects in Part II.

The following courses are available:

Aberystwyth

Agriculture; Applied Mathematics; Biochemistry; Biology; Botany; Chemistry; Dairy Science; Education; Geography; Geology; Philosophy; Physics; Pure Mathematics; Statistics; Zoology.

Bangor

Agricultural Botany; Agricultural Zoology; Agriculture; Biochemistry and Soil Science; Botany; Chemistry; Control Engineering; Economics; Education; Electronics; Forest Zoology; Forestry; Marine Biology; Materials Science; Mathematics; Applied Mathematics; Pure Mathematics; Philosophy; Physical Oceanography; Physics; Psychology; Zoology.

Swansea

Any two of the subjects offered for B.Sc. Honours (*see below*); Microbiology is also offered.

B.Sc. Special, Honours and Joint Honours: 3 years. Classification of Award: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class.

The following courses are available at each of the constituent Colleges except where otherwise indicated.

Special or Honours

Agriculture (Aberystwyth and Bangor); Agricultural Biochemistry (Aberystwyth and Bangor); Agricultural Botany (Aberystwyth and Bangor); Agricultural Economics (Aberystwyth only); Anatomy (Cardiff only); Botany; Chemistry; Economics; Education (Aberystwyth and Cardiff); Electronic Engineering (Bangor only); Chemical Engineering (Swansea only); Civil, Electrical and Mechanical Engineering (Cardiff and Swansea); Forestry (Bangor only); Fuel Technology (Cardiff only); Geo-

graphy (Aberystwyth and Swansea); Geology (Aberystwyth, Cardiff and Swansea); Mathematics; Metallurgy (Cardiff and Swansea); Microbiology (Cardiff only); Mining (Cardiff only); Physics; Physiology (Cardiff only); Zoology.

Joint Honours, Bangor only

Electronics and Mathematics; Electronics and Physics; Mathematics (Pure and Applied); Philosophy and Psychology; Physics and Mathematics; Physics and Materials Science.

Joint Honours, Cardiff only

Archaeology and Geology; Archaeology and Zoology; Archaeology and Botany; Biochemistry and Chemistry; Biochemistry and Botany; Biochemistry and Microbiology; Biochemistry and Physiology; Botany and Chemistry; Botany and Geology; Botany and Zoology; Chemistry and Pure Mathematics; Chemistry and Applied Mathematics; Chemistry and Physics; Chemistry and Metallurgy; Chemistry and Geology; Chemistry and Zoology; Chemistry and Microbiology; Chemistry and Physiology; Economics and Pure Mathematics; Geology and Physics; Geology and Zoology; Physics and Pure Mathematics; Physics and Applied Mathematics; Physiology and Zoology; Psychology and Zoology; Psychology and Pure Mathematics; Psychology and Applied Mathematics; Psychology and Physics.

Joint Honours, Swansea only

Mathematics

(ii) OTHER FIRST DEGREES, EXCLUDING MEDICINE AND DENTISTRY

B.Sc.(Econ.) Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class or Pass. Courses are available at Aberystwyth, Cardiff and Swansea.

LL.B.: 3 years. The degree may be awarded as an Honours degree (1st Class, 2nd Class and 3rd Class) or as a Pass degree. A course is available at Aberystwyth.

B.Mus.: 3 years. The degree may be awarded as an Honours degree or as a Pass degree. It may also be taken as a second degree, but as such is not open to Honours B.A.'s in Music. Courses are available at Aberystwyth, Bangor and Cardiff.

B.Pharm.: 3 years. The degree may be awarded with or without Honours. A course is offered at Cardiff in conjunction with the Welsh National School of Medicine and the Welsh College of Advanced Technology.

B.Arch.: 5 years. The degree may be awarded as an Honours degree (1st Class and 2nd Class) or as a Pass degree.

(iii) FIRST DEGREES IN MEDICINE AND DENTISTRY

M.B., B.Ch.: 5 years. The degree may be awarded with Honours or Commendation in the Final examinations and Distinctions may be awarded in individual subjects. Pre-clinical courses are taken at Cardiff and subsequent courses at the Welsh National School of Medicine.

B.D.S.: 5 years, 2 terms. The degree may be awarded with Honours or Commendation in the Final examinations and Distinctions may be awarded in individual subjects. Pre-clinical courses are taken at Cardiff and subsequent courses at the Welsh National School of Medicine.

HIGHER DEGREES

(i) MASTERS' DEGREES AND BACHELOR OF DIVINITY

M.A.; M.Sc.; M.Mus.; LL.M.; M.Pharm.; M.Sc.Econ.

The degrees of M.A., M.Sc. and LL.M. are awarded to Welsh and other graduates who undertake research in one of the constituent Colleges. Honours graduates are required to do research for one year, others for two.

B.D.: awarded after a course of study lasting three years in one of the theological colleges associated with the University (Aberystwyth United Theological College, Bangor School of Theology, Cardiff School of Theology, the Congregational Memorial College, Swansea).

(ii) DOCTORATES

D.Litt.; D.Sc.; D.Mus.; D.D.

Ph.D.: not less than 2 years' full-time research at one of the constituent Colleges or the Welsh School of Medicine; open to Welsh and other graduates who already have an M.A. (or B.D.) degree or have taken 1 year's approved research or have 1 year's approved postgraduate technical experience.

HONORARY DEGREES

M.A.; M.Sc.; M.Mus.; D.Litt.; D.Sc.; D.Mus.; D.D.; LL.D.

DIPLOMAS AWARDED BY THE UNIVERSITY OF WALES

Diploma in Education: 1 year postgraduate; written examination and practical teaching test; may be awarded in Classes 1, 2 or 3.

Diploma in Public Health (D.P.H.): 1 year full-time or 18 months part-time or 15 months full- and part-time; may be taken 2 years after obtaining registrable medical qualifications.

Diploma in Tuberculosis and Chest Diseases (D.T.C.D.): may be taken 2 years after obtaining registrable medical qualifications (including 12 months' resident appointment in a tuberculosis hospital and attending approved courses of instruction).

Diplomas in Agricultural Science or Forestry: at least 1 year for graduates and others with equivalent qualifications.

Diploma in Theology: 3 years; open to student members of the Associated Theological Colleges and to other persons approved by the Admissions Committee of the Faculty of Theology.

Diploma in Palaeography and Archives Administration: 1 year postgraduate.

Diploma in Micropalaeontology: 1 year postgraduate.

Diploma in Statistics: 1 year postgraduate.

Certificate of Oral Proficiency in French: there is no specific course for this Certificate, which may be taken by all degree students.

DIPLOMAS AND CERTIFICATES AWARDED BY THE CONSTITUENT COLLEGES

(i) ABERYSTWYTH

Diploma in Physics of Atmosphere: 1 year postgraduate.

Diploma in Electronic Physics: 1 year postgraduate.

Diploma in Bilingual Education: 1 year postgraduate.

Diploma in Pure Mathematics: 1 year postgraduate.

Certificate in International Law and Relations: 1 year.

Certificate in Palaeography: 1 year postgraduate.

Certificate in Biblical Studies: 1 year postgraduate.

(ii) BANGOR

Diploma in English as a second Language: 1 year postgraduate.

Diploma in Linguistics: 1 year postgraduate.

Diploma in Mathematical Physics: 1 year postgraduate.

Diploma in Agricultural Botany (Crop Protection): 1 year postgraduate.

Diploma in Remedial Education: 1 year postgraduate.

(iii) CARDIFF

Diploma in Metalliferous Mining: 3 years; open to candidates who obtain the B.Sc. in Mining and qualify in Metallurgy.

Diploma in Metallurgy: 3 years.

Diploma in Music: the Diploma may be conferred on students who have completed Parts I and II (first year) of the B.A. Pass degree in Music. The Diploma, together with a year's course of professional training, is recognised as a qualification for specialist teachers of Music.

Diploma in Social Science: 2 years for non-graduates, who must be at least 19 and have been employed for 1 year; examinations and field work; 1 year for graduates.

Diploma in Personnel Management: 1 year for graduates, or Social Science diplomates under the age of 24; examinations and field work.

Post-credential Diploma in Applied Social Studies: 1 year; candidates must be at least 21; intending Psychiatric Social Workers take an additional four months.

Diploma in Industrial Administration: 1 year for graduates in Engineering and other Applied Sciences.

(iv) SWANSEA

Diploma in Applied Social Studies.

Diploma in Social Development and Social Administration: 1 year for overseas students.

Diploma in Youth Leadership and Organisation: 1 year.

Diploma in Social Administration: 2 years (1 year for suitably qualified graduates).

Diploma in Cartography: 1 year postgraduate.

Diploma in Mathematical Statistics and Computational Analysis: 1 year postgraduate.

Diploma in Mathematical Physics: 2 years postgraduate.

Diploma in Chemical Engineering: 1 year.

Diploma in Education of Backward Children: 1 year, for practising teachers.

Diploma in Educational Psychology: 1 year.

WELSH NATIONAL SCHOOL OF MEDICINE

34, Newport Road, Cardiff, Glamorgan

FIRST DEGREES

M.B., B.Ch.: (the first medical degrees of the University of Wales) the course consists of three parts:

- (a) Pre-medical (3 terms) which can be taken in any of the constituent Colleges.
- (b) Pre-clinical (6 terms) which can be taken at University College of South Wales and Monmouthshire, Cardiff.
- (c) Clinical (33 months) taken in the Welsh National School of Medicine.

The courses of instruction are also recognised as satisfying the external regulations for the London M.B., B.S. degrees and the regulations of other universities.

In addition to courses for the **University Diplomas** the School offers a nine month course of instruction for Health Visitors leading to the **Certificate of the Royal Society of Health.**

ST. DAVID'S COLLEGE

Lampeter, Cardiganshire

Founded 1822, and incorporated by Royal Charter 1829, to provide a residential university for ordinands, the College has awarded its own B.D. since 1852 and its own B.A. since 1865. The College was admitted to the list of university colleges recognised by the University Grants Committee for Treasury grants in 1961.

FIRST DEGREES

B.A. General: 3 years. Students take two main subjects for Part II chosen from among the following:

Biblical Studies; History; English Literature; Philosophy;
Pure Mathematics; Welsh Language and Literature;
Greek; Latin; Greek and Roman Literature and Civilisation;
French; German.

B.A. Honours: 3 years. Classification of Honours: 1st Class, 2nd Class (Divs 1 or 2), 3rd Class.

The following courses are available:

Classics; English; French; German; History; Latin; Philosophy; Theology; Theology and Philosophy; Welsh.

HIGHER DEGREE

B.D.: graduates of St. David's may count their 3 years' residence towards the 10 terms required for the award of the degree of B.D. Other graduates are admitted to the B.D. course, but are required to establish 10 terms' full-time residence.

DIPLOMAS AWARDED

Licence in Theology (L.Th.): open to graduates of all universities; 2 years full-time.

Diploma in Theology: 2 years' full-time for graduates, 3 years for non-graduates.

UNIVERSITY OF WARWICK

Coventry, Warwickshire

(Abbreviation: Warw.)

(First students admitted 1965)

FIRST DEGREES

(i) FIRST DEGREE IN ARTS

B.A. Honours: 3 years. Courses are available in the following subjects:

Economics; Economics and Sociology; Economics and Politics; History; Law; Philosophy; Philosophy and Politics; French Studies; French and European Literature; English and European Literature; English and American Literature; Mathematics; Mathematics and Economics.

(ii) FIRST DEGREE IN SCIENCE

B.Sc. Honours: 3 years. Courses are available in the following subjects:

Engineering Science (including Electrical Science); Engineering and Economics; Molecular Sciences (Chemistry, Biochemistry, Crystallography); Physics (including Theoretical Physics, Materials Science); Mathematics.

HIGHER DEGREES

(i) MASTERS' DEGREES

M.A.: may be awarded 1 year after B.A.

M.Sc.: may be awarded 1 year after B.Sc. Courses are available in Mathematics and Molecular Sciences.

M.Phil.: may be awarded 2 years after B.A. or B.Sc.

(ii) DOCTORATE

Ph.D.: may be awarded 3 years after B.A. or B.Sc.

WELSH COLLEGE OF ADVANCED TECHNOLOGY

Cathays Park, Cardiff

Undergraduate courses at the College formerly led to the **Dip.Tech.**, the internal **B.Arch.** and **B.Pharm.** degrees of the University of Wales and external degrees of London University. As an interim measure courses will lead to Graduateships. The College is not to become an independent university, but may develop in association with the University of Wales.

FIRST DEGREES

(i) FIRST DEGREES IN ARTS

B.A. in General Studies: 3 years. Classification of Award: Honours or Pass.

Students take three subjects from among the following:

English; History; Education; Philosophy; Economics; Economic History.

B.A.: 3 years. Classification of Award: Honours or Pass.

Courses are available in:

Town Planning; Economics and Politics (starting 1966).

B.Sc.(Econ.) (London): this course will be superseded in 1966 by that for the B.Sc.(Econ.) (*see below*).

B.Sc.(Econ.): 3 years (including 16 weeks' practical experience). Classification of Award: Honours or Pass.

LL.B. (London): this full-time course was introduced in 1965 but it will be superseded in 1966 by that for the LL.B. (*see below*).

LL.B.: 3 years. Classification of Award: Honours or Pass.

(ii) FIRST DEGREES IN SOCIAL STUDIES

B.Sc.(Tech.): 4 years sandwich. Classification of Award: Honours or Pass.

Courses will be offered in 1966 for Industrial Economics and Occupational Psychology.

(iii) FIRST DEGREES IN SCIENCE AND TECHNOLOGY

B.Sc. in General Studies: 3 years. Classification of Award: Honours or Pass.

Students read three subjects for Part I (first year) from among Biology, Chemistry, Mathematics and Physics; and two subjects for Parts II and III, chosen in accordance with the Part I group.

B.Sc.(Tech.): 4 years. Classification of Award: Honours or Pass. Courses are available in the following subjects:

Applied Physics (sandwich); Industrial Chemistry (sandwich); Statistics (sandwich); Industrial Mathematics (sandwich); Maritime Studies (sandwich).

B.Eng.: 3 years. Classification of Award: Honours or Pass.

Courses are available in Electrical Engineering and Mechanical Engineering.

B.Eng.(Tech.): 4 years sandwich. Courses are available in: Building Technology; Civil Engineering; Electrical Engineering; Mechanical Engineering; Production Engineering.

B.Arch.(Wales) (an internal degree of the University of Wales): 5 years. Classification of Honours: 1st Class, 2nd Class and Pass. The College expects to begin a course leading to its own degree in Architecture in 1967-68. The degree will probably be known as

B.A.(Arch.).

WELSH COLLEGE OF ADVANCED TECHNOLOGY

COLEG TECHNOLEG UWCHRADD CYMRU

Cathays Park, Cardiff

The Welsh College of Advanced Technology is being granted university status, although the form which this is to take is still the subject of discussion.

In the meantime, in addition to courses in Architecture and Pharmacy, leading to internal degrees of the University of Wales, and in Economics, leading to that of the University of London, the College offers courses planned for conversion to degree courses, as soon as possible, in Applied Physics, Building Technology, Civil Engineering, Electrical Engineering, Industrial Chemistry, Industrial Mathematics, Maritime Studies, Mechanical Engineering, Occupational Psychology, Ophthalmic Optics, Production Engineering, Statistics and Town Planning.

A number of Postgraduate courses are available leading to Postgraduate Diplomas and Fellowships to which the same arrangements will apply; several Research Studentships similar to those of the Science Research Council (S.R.C.) are offered annually as well as Research Fellowships.

The College possesses an electronic computer and operates a language laboratory, and the first Hall of Residence was opened at the beginning of the 1965/66 Session.

Prospectus and further particulars can be obtained on application to the Registrar.

(iv) FIRST DEGREES IN MEDICAL SCIENCE

B.Pharm.(Wales) (an internal degree of the University of Wales): 4 years. Classification of Award: the degree may be awarded with or without Honours.

B.Pharm. and Ph.C.: instead of following a course for the degree of B.Pharm.(Wales), students may read for the proposed College degree of B.Pharm. and for the diploma of Pharmaceutical Chemist (Ph.C.). This is a joint course. Until the degree of B.Pharm. is instituted candidates will sit for the Ph.C.

B.Sc.(Tech.) in Environmental Health: 4 years sandwich. Classification of Award: Honours or Pass.

B.Sc. in Ophthalmic Optics: 3 years. Classification of Award: Honours or Pass.

HIGHER DEGREES AND DIPLOMAS, ETC.

On receiving its Charter the College expects to confer the degrees of Master of Arts, Science, Architecture and Pharmacy and of Doctor of Philosophy (Ph.D.). The College at present offers the following postgraduate courses:

(i) POSTGRADUATE DIPLOMA COURSES

Postgraduate Diploma in Instrument Technology: 1 year full-time; this course will probably lead in future to the degree of M.Sc.

Postgraduate Diploma in Electronics: 1 year full-time; this course will probably lead in future to the degree of M.Sc.

Postgraduate Diploma in Urban Design: 2 years full-time for graduates in approved subjects; this course will probably lead in future to the degree of M.A.

Postgraduate Diploma in the Teaching of English as a Foreign Language: 1 year full-time for suitably qualified and experienced secondary teachers from the United Kingdom and overseas; candidates must be graduates or have equivalent qualifications.

Postgraduate Diploma in English Studies for Foreign Students: 1 year full-time for foreign graduates or students with equivalent qualifications.

Postgraduate Diploma in Linguistic Science: 1 year full-time for foreign graduates or students with equivalent qualifications.

Postgraduate Diploma in Operational Research: 1 year full-time for graduates or students with equivalent qualifications; this course will probably lead in future to the degree of M.Sc.

(ii) OTHER COURSES

Research Diploma; Fellowship of the Welsh College of Advanced Technology: students with suitable graduate or equivalent qualifications may enter for either of these awards in Chemistry or Biology. Usually $1\frac{1}{2}$ to 2 years' research is required for the Diploma and 3 years' research for the Fellowship. These two awards will probably be converted into the degrees of M.Sc. and Ph.D. when the College receives its Charter.

College Diploma in Town Planning: a 3-year part-time course for town planners, architects, surveyors, engineers and graduates in certain subjects who are eligible to become candidates for the External Final Examination of the Town Planning Institute.

(iii) PROFESSIONAL COURSES

Graduateship of the Royal Institute of Chemistry, Part II: 1 year full-time.

Institution of Electrical Engineers, Part III: 7 months full-time.

(iv) MINISTRY OF TRANSPORT MARITIME CERTIFICATES

Foreign Going Certificates: Extra Master; Master; First Mate; Second Mate.

Home Trade Certificates: Master; Mate.

Radar Observer Certificate.

UNIVERSITY OF YORK

Heslington, York

FIRST DEGREE

All courses lead to an Honours degree, but candidates who fail to reach Honours standard may be considered for the award of a Pass degree. Degree courses are of two kinds, Single Subject and Combined Subjects.

B.A. Honours Single Subject: 3 years (4 years for transfer Mathematics). Courses are available in the following subjects:

Economics; English; History; Politics; Sociology.

Chemistry; Mathematics; Physics; Biology.

B.A. Honours Combined Subject: 3 years (4 years for transfer Mathematics). Courses are available in the following combinations of subjects:

Combinations in which the subjects have equal status

English and Language; English and Music; English and Philosophy; History and Language; Philosophy and History; Philosophy and Language; Philosophy and Mathematics.

Combinations of a main and a subsidiary subject

Language and English; Language and Education; Language and Philosophy; English and Language; English and Music; English and Education; English and History; English and Philosophy; English and Social Sciences; Music and Education; History and Language; History and English; History and Education; History and Philosophy; History and Politics; History and Social Sciences; History and Biology; Mathematics and Language; Mathematics and Education; Mathematics and Philosophy; Mathematics and Economics; Mathematics and Physics; Philosophy and English; Philosophy and History; Philosophy and Language; Philosophy and Mathematics; Philosophy and Politics; Economics, Politics and Sociology; Biology and Language; Biology and Education; Biology and Chemistry; Biology and Physics; Chemistry and Education; Physics and Education.

HIGHER DEGREES

(i) MASTERS' AND EQUIVALENT DEGREES

B.Phil.: York graduates who have obtained a high class in the B.A. examinations may be admitted to a fourth year course leading to the B.Phil.; other graduates will also be accepted.

M.Phil.: may be awarded 2 years after B.A.

(ii) DOCTORATE

D.Phil.: may be awarded 3 years after B.A.

LIST OF SUBJECTS OFFERED IN FIRST DEGREE COURSES

The letter 'p' placed before a degree indicates that the subject concerned forms part, not the whole, of the course leading to the degree.

A question mark '?' indicates that the title of the degree had not been decided at the time of writing.

Abbreviated titles used in list:

Aberd.	University of Aberdeen.
Aston	Birmingham College of Advanced Technology (proposed University of Aston in Birmingham).
Bath	Bristol College of Science and Technology (proposed Bath University of Technology).
Batt.	Battersea College of Advanced Technology (proposed University of Surrey).
Belf.	Queen's University, Belfast.
Birm.	University of Birmingham.
Brad.	University of Bradford (former Bradford Institute of Technology).
Brist.	University of Bristol.
Brun.	Brunei College (proposed Brunel University).
Cantab.	University of Cambridge.
Chel.	Chelsea College of Science and Technology (proposed University).
Dunelm.	University of Durham.
E. Anglia	University of East Anglia.
Edin.	University of Edinburgh.
Essex	University of Essex.
Exet.	University of Exeter.
Glas.	University of Glasgow.
H.-W.	Heriot-Watt College (proposed University).
Hull	University of Hull.
Keele	University of Keele.
Kent	University of Kent at Canterbury.
Lamp.	St. David's College, Lampeter.
Lanc.	University of Lancaster.
Leeds	University of Leeds.
Leic.	University of Leicester.
Liv.	University of Liverpool.
Lond.	University of London.
Constituent Colleges and Schools:	
Bed.	Bedford College.
Birk.	Birkbeck College.
C.I.	Courtauld Institute.
Imp.	Imperial College of Science and Technology.
K.C.	King's College.
L.S.E.	London School of Economics and Political Science.
Q.E.C.	Queen Elizabeth College.
Q.M.C.	Queen Mary College.
R.H.C.	Royal Holloway College.
R.V.C.	Royal Veterinary College.

S.E.E.S.	School of Slavonic and East European Studies.
S.O.A.S.	School of Oriental and African Studies.
S.P.	School of Pharmacy.
U.C.	University College.
West.	Westfield College.
Wye	Wye College.
Lough.	Loughborough College of Technology (proposed Loughborough University of Technology).
Manc.	University of Manchester.
Newc.	University of Newcastle upon Tyne.
North.	Northampton College, London (proposed University).
Nott.	University of Nottingham.
Oxon.	University of Oxford.
Rdg.	University of Reading.
Salf.	Royal College of Advanced Technology, Salford (proposed University of Salford).
Sheff.	University of Sheffield.
S'ton	University of Southampton.
St. A.	University of St. Andrews.
Constituent Colleges:	
Queen's	Queen's College.
St. Mary's	St. Mary's College.
St. Salv.	St. Salvator's College.
Strath.	University of Strathclyde.
Sus.	University of Sussex.
Wales	University of Wales.
Constituent Colleges:	
Aberyst.	University College of Wales, Aberystwyth.
Bangor	University College of North Wales, Bangor.
Card.	University College of South Wales and Monmouthshire, Cardiff.
Swans.	University College of Swansea.
Warw.	University of Warwick.
Welsh	Welsh College of Advanced Technology, Cardiff.
York	University of York.

Subject

Degree and University

**ACCOUNTANCY,
ACCOUNTING**

p B.Com. Birm.; B.A.? Brad.; p B.A. Brist.; p B.Sc.(Econ.) Hull; p B.A., B.A. Kent; p B.Com. Leeds; B.Com. Liv.; B.Sc.(Econ.) Lond. (L.S.E.); B.A.(Econ.) Manc.; p B.A. Newc.; p B.A. Nott.; p B.Sc. Salf.; p B.A.(Econ.), B.A.(Econ.) Sheff.; p B.Sc.(Soc.Sci.) S'ton; B.A. Strath.; p B.Sc. Econ. Wales (Aberyst., Card.).

**ADMINISTRATION,
ADMINISTRATIVE
STUDIES**

p B.Sc. Bath; B.A.? Brad.; B.A.(Admin.) Manc.; B.A. Strath.

**ADMINISTRATION,
PUBLIC, INDUSTRIAL**

p B.Sc. Salf.; B.A. Strath.

AERONAUTICS

p B.Sc. S'ton.

<u>Subject</u>	<u>Degree and University</u>
AFRICAN STUDIES	p B.Soc.Sc. Birm.; B.A. Lond. (S.O.A.S.); B.A. Sus.
AGRICULTURAL SCIENCES	B.Agr. Belf.; B.Sc. Edin.; B.Sc.(Agric.Sc.) Lond. (Wye).
AGRICULTURE	B.Sc.(Agr.) Aberd.; B.A. Cantab.; B.Sc. Edin.; B.Sc. Glas.; B.Sc. Leeds; B.Sc.(Agric.) Lond. (Wye); B.Sc. Newc.; B.Sc. Nott.; B.A. Oxon.; B.Sc. Rdg.; p B.Sc., B.Sc. Wales (Aberyst., Bangor).
Agricultural Biochemistry	B.Sc. Newc.; B.Sc. Nott.; B.Sc. Wales (Aberyst., Bangor).
Agricultural Botany	B.Agr. Belf.; B.Sc. Glas.; B.Sc. Leeds; B.Sc. Nott.; B.Sc. Rdg.; B.Sc. Wales (Aberyst., Bangor).
Agricultural Chemistry	B.Agr. Belf.; B.Sc. Glas.; B.Sc. Leeds.
Agricultural Economics	B.Sc. Edin.; B.Sc. Glas.; B.Sc. Leeds; B.Sc. Rdg.; B.Sc. Wales (Aberyst.).
Agricultural Engineering	B.Sc. Newc.
Agricultural Microbiology	B.Sc. Nott.
Agricultural Zoology	B.Agr. Belf.; B.Sc. Glas.; p B.Sc. Leeds; B.Sc. Newc.; B.Sc. Nott.; B.Sc. Wales (Bangor).
AGRONOMY	B.Sc. Nott.
ALTAIC	B.A. Cantab.
AMERICAN STUDIES	p B.A. Birm.; p B.A. Hull; p B.A., B.A. Manc.; B.A. Sus.; p B.A. Wales (Aberyst.); B.A. Warw.
ANATOMY	B.Sc. Aberd.; B.Sc. Belf.; B.Sc. Birm.; B.Sc. Brist.; B.A. Cantab.; B.Sc. Edin.; B.Sc. Glas.; B.Sc. Leeds; B.Sc. Liv.; B.Sc. Lond. (Bed., U.C.); p B.Sc., B.Sc. Newc.; p B.Sc. Sheff.; B.Sc. St. A. (Queen's); B.Sc. Wales (Card.).
ANGLO-SAXON	B.A. Cantab.
ANIMAL NUTRITION	B.Sc. Rdg.
ANIMAL PHYSIOLOGY	p B.Sc. E. Anglia; B.A. Oxn.; p B.Sc. Sus.
ANIMAL PRODUCTION	B.Sc. Nott.
ANTHROPOLOGY (including Social Anthropology)	p B.A. Cantab.; p B.A. Dunelm.; B.A., B.Sc. (Econ.) Lond. (S.O.A.S., L.S.E., U.C.); B.Sc. Lond. (U.C.); p B.A.(Econ.) Manc.; p B.A., B.A. Newc.; p B.Sc. Salf.; B.A. Sus.; p B.Sc.Econ. Wales (Swans.).
ARABIC, ARABIC STUDIES	B.A. Cantab.; B.A. Dunelm.; M.A. Edin.; p M.A. Glas.; p B.A. Leeds; p B.A., B.A. Lond. (S.O.A.S., U.C.); p B.A. Manc.; B.A. Oxon.; p M.A., M.A. St. A. (St. Salv.).
ARCHAEOLOGY	B.Sc. Belf.; p B.A. Birm.; p B.A. Brist.; p B.A. Cantab.; M.A. Edin.; p B.A. Exet.; p M.A. Glas.; B.A., p B.A., p B.Sc. Leic.; p B.A. Liv.; B.A., p B.Sc. Wales (Card.).

Subject	Degree and University
ARCHITECTURE, ARCHITECTURAL STUDIES	B.Sc., B.Arch. Bath; B.Sc. Belf.; B.A., B.Sc., B.Arch. Brist.; B.A. Cantab.; B.Arch. Edin.; B.Arch. Liv.; B.A., B.Sc. Lond. (U.C.); B.A. Manc.; B.A., B.Arch. Newc.; B.A. Nott.; B.A., B.Arch. Sheff.; B.Arch. Strath.; B.Arch. Wales (Card., Welsh); B.A. Welsh.
ARCHITECTURE, HISTORY OF	B.A. E. Anglia; p B.A. Newc.
ARTS, GENERAL, COMBINED ARTS	M.A. Aberd.; B.A. Belf.; B.A. Birm.; B.A. Brist.; B.A. Dunelm.; M.A. Edin.; M.A. Glas.; B.A. Kent; B.A. Lamp.; B.A. Leeds; B.A. Leic.; B.A. Liv.; B.A. Lond. (Bed., R.H.C.); B.A. Manc.; B.A. Newc.; B.A. Sheff.); B.A. S'ton; M.A. St. A. (Queen's, St. Salv.); B.A. Wales (Aberyst., Bangor, Card., Swans.); B.A. Welsh; B.A. York.
ASIAN STUDIES	B.A. Lond. (S.O.A.S.); B.A. Sus.
ASSYRIAN	p B.A. Lond. (S.O.A.S., U.C.).
ASSYRIOLOGY	B.A. Cantab.
ASTRONOMY	p B.Sc. Edin.; p M.A., B.Sc. Glas.; p B.Sc., B.Sc. Lond. (U.C.); p M.A., B.Sc. St. A. (St. Salv.).
ASTROPHYSICS	B.Sc. Edin.
AUTOMATIC CONTROL	B.Sc. & A.M.C.S.T. Manc.; B.Sc. Sus.
BACTERIOLOGY	B.Sc. Birm.; B.Sc. Edin.; p B.Sc., B.Sc. Glas.; p B.Sc., B.Sc. Leeds; B.Sc. Liv.; p B.Sc., B.Sc. Newc.
BEHAVIOURAL SCIENCE	B.Sc. Aston.
BENGALI	B.A. Lond. (S.O.A.S.).
BIBLICAL STUDIES	p M.A., M.A. Aberd.; p B.A. Lamp.; B.A. Manc.; p B.A. Sheff.; p B.A., B.A. Wales (Bangor, Card.).
BIOCHEMISTRY	B.Sc. Aberd.; B.Sc. Batt.; B.Sc. Belf.; B.Sc. Birm.; p B.Sc.? Brad.; B.Sc. Brist.; B.A. Cantab.; p B.Sc. Chel.; p B.Sc. E. Anglia; B.Sc. Edin.; p B.Sc., B.Sc. Glas.; B.Sc.? H.-W.; B.Sc. Hull; p B.Sc., B.Sc. Leeds; p B.Sc., B.Sc. Leic.; B.Sc. Liv.; p B.Sc., B.Sc. Lond. (Bed., Q.E.C., U.C.); B.Sc. & A.M.C.S.T. Manc.; B.A. Oxon.; B.Sc. Sheff.; p B.Sc. S'ton; B.Sc. Strath.; B.Sc. Sus.; B.Sc. St. A. (Queen's, St. Salv.); p B.Sc., B.Sc. Wales (Aberyst., Card.); p B.Sc. Warw.
Applied Biochemistry	B.Sc. Bath; B.Sc. Chel.; B.Sc.? H.-W.
Biochemistry and Soil Science	B.Sc. Wales (Bangor).
BIOLOGY, BIOLOGICAL SCIENCES	B.Sc. Aston; B.Sc. Birm.; B.A. Cantab.; B.Sc. E. Anglia; p B.Sc. Essex; p B.A. Keele; B.A. Lanc.; p B.Sc. Lond. (R.H.C.); B.Sc. Salf.; p B.Sc. Sheff.; B.Sc. Strath.; B.Sc. Sus.; B.Sc. Wales (Aberyst.); p B.Sc. Welsh; p B.A. York.

<u>Subject</u>	<u>Degree and University</u>
Applied Biology	B.Sc. Bath; B.Tech. Brad.; B.Tech. Brun.; B.Sc. Salf.; B.Sc. Strath.
Cell Biology	B.Sc. Leic.
Marine Biology	B.Sc. E. Anglia; p B.Sc. Wales (Bangor).
Structural Biology	p B.A. York.
BIOPHYSICS	p B.Sc. E. Anglia; B.Sc. Leeds.
BOTANY	B.Sc., B.Sc.(Agr.) Aberd.; B.Sc. Aston; B.Sc. Belf.; p B.Sc., B.Sc. Birm.; B.Sc. Brist.; B.A. Cantab.; p B.Sc., B.Sc. Chel.; p B.Sc., B.Sc. Dunelm.; p B.Sc. E. Anglia; B.Sc. Edin.; B.Sc. Exet.; B.Sc. Glas.; p B.Sc., B.Sc. Hull; p B.Sc., B.Sc. Leeds; p B.A., p B.Sc., B.Sc. Leic.; B.Sc. Liv.; p B.Sc., B.Sc. Lond. (Bed., Imp. (and A.R.C.S.)), K.C., Q.E.C., Q.M.C., R.H.C., U.C., West.); p B.Sc., B.Sc. Manc.; p B.Sc., B.Sc. Newc.; p B.Sc., B.Sc. Nott.; B.A. Oxon.; B.Sc. Rdg.; p B.Sc. Salf.; p B.Sc., B.Sc. Sheff.; p B.Sc., B.Sc. S'ton; B.Sc. St. A. (St. Salv.); p B.Sc., B.Sc. Wales (Aberyst., Bangor, Card., Swans.).
BRAZILIAN STUDIES	p B.A. Wales (Card.).
BREWING	B.Sc.? H.-W.
BUILDING	B.Sc. H.-W.
BUILDING SCIENCE AND TECHNOLOGY	B.Sc. Aston (and in Building Economics and Measurement); B.Sc. Bath; B.Eng. Liv.; B.Sc. & A.M.C.S.T. Manc.; B.Eng. Sheff.; B.Eng.(Tech.) Welsh.
BULGARIAN	B.A. Lond. (S.E.E.S.).
BURMESE	B.A. Lond. (S.O.A.S.).
BUSINESS ECONOMICS	p B.Sc.(Econ.) Hull; B.A. Strath.
BUSINESS MANAGEMENT	p B.Com. Birm.
BUSINESS OPERATION AND CONTROL	B.Sc. Salf.
BUSINESS STUDIES	B.A.? Brad.; p B.A.(Econ.) Sheff.
CELTIC STUDIES	M.A. Aberd.; B.A. Belf.; M.A. Edin.; M.A. Glas.; p B.A., B.A. Liv.
CENTRAL EUROPEAN STUDIES	B.A. Lond. (S.E.E.S.).
CERAMICS	B.Sc. Leeds; B.Sc.Tech. Sheff. (Ceramics with Refractories Technology).
CHEMICAL PHYSICS	B.Sc. Edin.; B.A. Essex; B.Sc. Kent; B.Sc. Manc.
CHEMICAL TECHNOLOGY	B.Tech. Brun.; B.Sc. Edin.

<u>Subject</u>	<u>Degree and University</u>
CHEMISTRY	B.Sc. Aberd.; B.Sc. Aston; B.Sc. Bath; B.Sc. Batt.; B.Sc. Belf.; B.Sc. Birm.; B.Tech. Brad.; B.Sc. Brist.; B.A. Cantab.; p B.Sc., B.Sc. Chel.; p B.Sc., B.Sc. Dunelm.; B.Sc. E. Anglia; B.Sc. Edin.; B.A. Essex; p B.Sc., B.Sc. Exet.; p B.Sc., B.Sc. Glas.; p B.Sc., B.Sc., Hull; p B.A. Keele; B.Sc. Kent; B.A. Lanc.; p B.Sc., B.Sc. Leeds; p B.Sc., B.Sc. Leic.; B.Sc. Liv.; p B.Sc., B.Sc. Lond. (Bed., Birk., Imp. (and A.R.C.S.), K.C., Q.E.C., Q.M.C., R.H.C., U.C., West.); p B.Tech. Lough.; p B.Sc., B.Sc., B.Sc. & A.M.C.S.T. Manc.; p B.Sc., B.Sc. Newc.; p B.Sc., B.Sc. Nott.; B.A. Oxon.; B.Sc. Rdg.; B.Sc. Salf.; p B.Sc., B.Sc. Sheff.; B.Sc. S'ton; B.Sc. St. A. (Queen's, St. Salv.); B.Sc. Strath.; B.Sc. Sus.; B.Sc. Wales (Aberyst., Bangor, Card., Swans.); p B.Sc. Warw.; p B.Sc. Welsh; B.A. York.
Applied Chemistry	B.Sc. Bath; B.Tech. Brun.; B.Sc.? H.-W.; B.Sc. Salf.; B.Sc. Strath.
Biological Chemistry	p B.Sc. Hull; B.Sc. Manc.; p B.Sc. Salf.
Chemical Physics	B.Sc. Edin.; B.A. Essex; B.Sc. Kent; B.Sc. Manc.
Colour Chemistry and Dyeing	B.Sc. Belf.; B.Sc.? Brad.; B.Sc. Leeds.
Industrial Chemistry	B.Tech. Brad.; B.Tech. Lough.; B.Sc. North.; B.Sc.(Tech.) Welsh.
Physical Chemistry	B.Sc. E. Anglia.
Polymer Chemistry	B.Sc. & A.M.C.S.T. Manc.
Theoretical Chemistry	B.Sc. Sus.
CHINESE, CHINESE STUDIES	B.A. Cantab.; B.A. Dunelm.; B.A. Leeds; B.A. Lond. (S.O.A.S.); B.A. Oxon.
CLASSICS	M.A. Aberd.; B.A. Belf.; B.A. Birm.; p B.A., B.A. Brist.; B.A. Cantab.; B.A. Dunelm.; M.A. Edin.; B.A. Exet.; M.A. Glas.; p B.A., B.A. Hull; B.A. Kent; B.A. Lamp.; B.A. Lanc.; B.A. Leeds; B.A. Leic.; B.A. Liv.; B.A. Lond. (Bed., K.C., Q.M.C., R.H.C., U.C., West.); B.A. Manc.; B.A. Newc.; B.A. Nott.; B.A. Oxon.; B.A. Rdg.; B.A. Sheff.; B.A. S'ton; B.A. Wales (Aberyst., Bangor, Card., Swans.).
COLOURING MATTERS	B.Sc. & A.M.C.S.T. Manc.
COMMERCE	B.Com. Birm.; B.Com., M.A. & B.Com. Edin.; B.Com. Leeds; B.Com. Liv.; B.A.(Econ.) Sheff.; p B.Sc.(Soc.Sci.) S'ton; B.A. Strath.; p B.Sc. (Econ.) Wales (Aberyst.).
COMMONWEALTH STUDIES	B.Sc.(Econ.) Hull.
COMPUTATION METHODS	B.Sc.(Econ.) Lond. (L.S.E.).
COMPUTER SCIENCE	p B.Sc. Edin.; B.Sc. Manc.

<u>Subject</u>	<u>Degree and University</u>
CRYSTALLINE STATE	B.A. Cantab.
CRYSTALLOGRAPHY	p B.A. Cantab.; p B.Sc. Warw.
CYBERNETICS	p B.Tech. Lough.; B.Sc. Rdg.
CZECH AND SLOVAK	B.A. Lond. (S.E.E.S.).
DAIRYING	B.Sc. Rdg.
DAIRY SCIENCE	B.Sc. Wales (Aberyst.).
DANISH	p B.A. Newc.
DENTISTRY	B.D.S. Belf.; B.D.S. Birm.; B.D.S. Brist.; B.D.S. Edin.; B.D.S. Glas.; B.Ch.D. Leeds; B.D.S. Liv.; B.D.S. Lond. (Guy's, King's, London, Royal Dental Hosp., U.C.H.); B.D.S. Manc.; B.D.S. Newc.; B.D.S. Sheff.; B.D.S. St. A. (Queen's); B.D.S. Wales (Card.).
DIETETICS	B.Sc. Batt.
DOMESTIC SCIENCE	B.Sc.(Dom.Sc.) Brist.; B.Sc. (Household Science) Lond. (Q.E.C.).
DRAMA	p B.A. Birm.; p B.A. Brist.; p B.A. Hull; p B.A., B.A. Manc.
DUTCH	B.A. Cantab.; B.A. Lond. (Bed.); p B.Sc. Salf.
EARTH SCIENCES	B.Sc. Leeds.
ECOLOGICAL SCIENCE	B.Sc. Edin.; B.A. York.
ECONOMETRICS	p B.Soc.Sc. Birm.; p B.Sc.(Econ.) Lond. (L.S.E.).
ECONOMICS	p M.A., M.A., B.Sc.(Agr.) Aberd.; p B.Sc. Aston; p B.Sc. Bath; B.Sc.(Econ.) Belf.; p B.Com., p B.Soc.Sc., p B.Sc. Birm.; B.A. Brad.; p B.A., B.A. Brist.; p B.A. Cantab.; p B.A. Dunelm.; B.A. E. Anglia; M.A. Edin.; B.A. Essex; p B.A., B.A. Exet.; B.Sc.(Econ.) Hull; p B.A. Keele; p B.A., B.A. Kent; p B.A., B.A. Lanc.; p B.A., B.A., B.Com. Leeds; p B.A., B.A., p B.Sc., B.Sc. Leic.; B.A. Liv.; p B.A., B.Sc.(Econ.) Lond. (Bed., L.S.E., Q.M.C., U.C.); p B.A., B.A.(Econ.) Manc.; p B.A., B.A. Newc.; B.A., p B.Sc. Nott.; p B.A. Oxon.; p B.A., B.A. Rdg.; p B.Sc. Salf.; p B.A., p B.A.(Econ.), B.A.(Econ.) Sheff.; p B.A., B.Sc.(Soc.Sci.) S'ton; p M.A. St. A. (Queen's); B.A. Strath.; B.A. Sus.; p B.A., B.A., p B.Sc., B.Sc., B.Sc.(Econ.) Wales (Aberyst., Bangor, Card., Swans.); p B.A., B.A., p B.Sc. Warw.; p B.Sc., B.Sc.(Econ.) Welsh; p B.A., B.A. York.
Industrial Economics	B.A. Nott.; B.Sc.(Tech.) Welsh.
Monetary Economics	B.Sc.(Econ.) Lond. (L.S.E.).

<u>Subject</u>	<u>Degree and University</u>
EDUCATION	B.Ed. Aberd.; B.Ed. Brist.; B.Ed. Glas.; B.Ed. Hull; B.A. & Dip.Ed., B.Ed. Keele; B.Ed. Leeds; B.Ed. Liv.; B.Ed. Nott.; p B.A., B.Ed. Sheff.; B.A., B.Ed. Sus.; p B.A., B.A. Wales (Aberyst., Bangor, Card.); p B.Sc., B.Sc. Wales (Aberyst.); p B.A. Welsh; p B.A. York.
Physical Education	p B.A. Birm.
Speech	B.Ed.(Speech) Newc.
EGYPTIAN	B.A. Dunelm.; B.A. Liv.; p B.A. Lond. (U.C.); B.A. Oxon.
EGYPTOLOGY	B.A. Cantab.
ELECTRICAL SCIENCES	B.A. Cantab.; p B.Sc. Warw.
ELECTRICITY, APPLIED	B.Sc. Rdg.
ELECTRONICS	B.Sc. Kent; B.Eng. Liv.; B.Sc. Salf.; p B.Sc., B.Sc. S'ton; B.Sc. St. A. (Queen's); p B.Sc. Sus.; p B.Sc. Wales (Bangor, Swans.).
EMBRYOLOGY	B.A. York.
ENGINEERING, ENGINEERING SCIENCE	B.Sc. Belf.; B.A. Cantab.; B.Sc. Dunelm.; B.Sc. Exet.; B.Sc. Leic.; B.Sc.(Eng.) & A.C.G.I. Lond. (Imp.); B.Tech. Lough.; B.A. Oxon.; B.Sc.(Eng.) S'ton; B.Sc. St. A. (Queen's); p B.Sc., B.Sc. Warw.
Aeronautical Engineering	B.Sc. Bath; B.Sc. Belf.; B.Sc. Brist.; B.Sc. Glas.; B.Sc.(Eng.) & A.C.G.I. Lond. (Imp.); B.Sc. (Eng.) Lond. (Q.M.C.); B.Tech. Lough.; B.Sc. Manc.; B.Sc. North.; B.Sc. Salf.; B.Sc. (Eng.) S'ton.
Airline Engineering	B.Sc. North.
Automotive Engineering	B.Tech. Lough.
Chemical Engineering	B.Sc. Aston; B.Sc. Batt.; B.Sc. Birm.; B.Tech. Brad.; B.A. Cantab.; B.Sc. Edin.; B.Sc. Exet.; B.Sc.? H.-W.; B.Sc. Leeds; B.Sc. and A.C.G.I. Lond. (Imp.); B.Sc.(Eng.) Lond. (U.C.); B.Tech. Lough.; B.Sc. & A.M.C.S.T. Manc.; B.Sc. Newc.; B.Sc. Nott.; B.Sc. Salf.; B.Sc.Tech. Sheff.; B.Sc. Strath.; B.Sc. Wales (Swans.).
Civil Engineering	B.Sc.(Eng.) Aberd.; B.Sc. Aston; B.Sc. Batt.; B.Sc. Belf.; B.Sc. Birm.; B.Sc.?, B.Tech. Brad.; B.Sc. Brist.; p B.Sc. Dunelm.; B.Sc. Edin.; B.Sc. Glas.; B.Sc.? H.-W.; B.Sc. Leeds; B.Eng. Liv.; B.Sc.(Eng.) & A.C.G.I. Lond. (Imp.); B.Sc.(Eng.) Lond. (K.C., Q.M.C., U.C.); B.Sc., B.Tech. Lough.; B.Sc., B.Sc. & A.M.C.S.T. Manc.; B.Sc. Newc.; B.Sc. North.; B.Sc. Nott.; B.Sc. Salf.; B.Eng. Sheff.; B.Sc.(Eng.) S'ton; B.Sc. St. A. (Queen's); B.Sc. Strath.; B.Sc. Wales (Card., Swans.); B.Eng.(Tech.) Welsh.
Communications Engineering	B.Sc. & A.M.C.S.T. Manc.

<u>Subject</u>	<u>Degree and University</u>
Control Engineering	B.Sc. Wales (Bangor).
Electrical Engineering	B.Sc.(Eng.) Aberd.; B.Sc. Aston; B.Sc. Bath; B.Sc. Batt.; B.Sc. Belf.; B.Sc. Birm.; B.Tech. Brad.; B.Sc. Brist.; p B.Tech., B.Tech. Brun.; p B.Sc. Dunelm.; B.Sc. Edin.; B.Sc. Glas.; B.Sc.? H.-W.; p B.Sc. Leeds; B.Eng. Liv.; B.Sc.(Eng.) & A.C.G.I. Lond. (Imp.); B.Sc. (Eng.) Lond. (K.C., Q.M.C., U.C.); B.Tech. Lough.; p B.Sc., B.Sc., B.Sc. & A.M.C.S.T. Manc.; B.Sc. Newc.; p B.Sc. North.; B.Sc. Nott.; B.Sc. Salf.; B.Eng. Sheff.; B.Sc.(Eng.) S'ton; B.Sc. St. A. (Queen's); B.Sc. Strath.; p B.Sc. Sus.; B.Sc. Wales (Card., Swans.); p B.Sc. Warw.; B.Eng., B.Eng. (Tech.) Welsh.
Electronic Engineering	B.Sc. Birm.; p B.Sc. Leeds; B.Sc. Liv.; p B.Sc., B.Sc. & A.M.C.S.T. Manc.; B.Eng. Sheff.; B.Sc.(Eng.) S'ton; B.Sc. Wales (Bangor).
Environmental Control Engineering	B.Sc. Strath.; p B.Sc. Wales (Bangor).
Fuel Engineering	B.Sc. Leeds.
Industrial Engineering	B.Tech. Lough.; B.Sc. Wales (Swans.).
Instrument and Control Engineering	B.Sc. North.
Marine Engineering	B.Sc. Newc.
Mechanical Engineering	B.Sc.(Eng.) Aberd.; B.Sc. Aston; B.Sc. Bath; B.Sc. Batt.; B.Sc. Belf.; B.Sc. Birm.; B.Tech. Brad.; B.Sc. Brist.; p B.Tech., B.Tech. Brun.; B.Sc. Edin.; B.Sc. Glas.; B.Sc.? H.-W.; B.Sc. Leeds; B.Eng. Liv.; B.Sc.(Eng.) & A.C.G.I. Lond. (Imp.); B.Sc.(Eng.) Lond. (K.C., Q.M.C., U.C.); B.Tech. Lough.; B.Sc., B.Sc. & A.M.C.S.T. Manc.; B.Sc. Newc.; B.Sc. North.; B.Sc. Nott.; B.Sc. Salf.; B.Eng. Sheff.; B.Sc. (Eng.) S'ton; B.Sc. St. A. (Queen's); B.Sc. Strath.; B.Sc. Sus.; B.Sc. Wales (Card., Swans.); B.Eng., B.Eng.(Tech.) Welsh.
Mechanical Engineering and Economics	B.Sc., B.Com. (Joint), B.Sc. Birm.
Metallurgy (Engineering)	B.Sc. Bath; p B.Sc., B.Sc. Batt.; B.Eng. Liv.; B.Sc.(Eng.) & A.R.S.M. Lond. (Imp.); B.Sc. Salf.
Minerals Engineering	B.Sc. Birm.
Nuclear Engineering	B.Sc.(Eng.) Lond. (Q.M.C.).
Production Engineering	B.Sc. Aston; B.Sc. Bath; B.Sc. Birm.; p B.Sc.? Brad.; B.Tech. Lough.; B.Sc. North.; B.Sc. Nott.; p B.Sc. Salf.; B.Eng.(Tech.) Welsh.
Structural Engineering	B.Eng. Sheff.; p B.Sc. Wales (Card.).
Engineering with Business Studies	B.Eng. Sheff.; B.Sc.(Eng.) S'ton.
Operational (Management) Engineering	B.Sc. Bath.

<u>Subject</u>	<u>Degree and University</u>
ENGLISH, ENGLISH STUDIES	M.A. Aberd.; p B.A., B.A. Belf.; p B.A., B.A. Birm.; p B.A., B.A. Brist.; B.A. Cantab.; p B.A., B.A. Dunelm.; B.A. E. Anglia; p M.A., M.A. Edin.; B.A. Essex; p B.A., B.A. Exet.; p M.A., M.A. Glas.; p B.A., B.A. Hull; p B.A. Keele; p B.A., B.A. Kent; p B.A., B.A. Lamp.; p B.A., B.A. Lanc.; p B.A., B.A. Leeds; p B.A., B.A., p B.Sc. Leic.; p B.A., B.A. Liv.; B.A. Lond. (Bed., Birk., K.C., Q.M.C., R.H.C., U.C., West.); p B.A., B.A. Manc.; p B.A., B.A. Newc.; p B.A., B.A. Nott.; B.A. Oxon.; p B.A., B.A. Rdg.; p B.A., B.A. Sheff.; p B.A., B.A. S'ton; p M.A., M.A. St. A. (St. Salv.); B.A. Strath.; B.A. Sus.; p B.A., B.A. Wales (Aberyst., Bangor, Card., Swans.); B.A. Warw.; p B.A. Welsh; p B.A., B.A. York.
ENVIRONMENTAL HEALTH	B.Sc. Aston; B.Sc.(Tech.) Welsh.
ENVIRONMENTAL STUDIES	B.A. Lanc.; B.Tech. Lough.
ERGONOMICS	p B.Tech. Lough.
ESTATE MANAGEMENT	B.Sc.(Est.Man.) Lond. (College of Estate Management).
EUROPEAN INSTITUTIONS	p M.A. Edin.
EUROPEAN STUDIES	B.A. E. Anglia; p B.A. Exet.; p B.Sc. Manc.; B.A. Sus.; p B.A. Warw.
FIBRE SCIENCE	B.Sc. Leeds; B.Sc. Strath.
FIELD STUDIES	p B.Sc. E. Anglia.
FINANCIAL ADMINISTRATION	p B.A.(Econ.) Sheff.
FINE ART	B.A. Cantab.; B.A. E. Anglia; M.A. Edin.; p B.A., B.A. Leeds; B.A. Newc.; B.A. Nott.; B.A. Rdg.
FOOD SCIENCE	B.Sc. Belf.; B.Sc. Leeds; B.Sc. Nott.; B.Sc. Rdg.; B.Sc. Strath.
FOREST ZOOLOGY	B.Sc. Wales (Bangor).
FORESTRY	B.Sc.(For.) Aberd.; B.Sc. Edin.; B.A. Oxon.; p B.Sc., B.Sc. Wales (Bangor).
FOUNDRY TECHNOLOGY	B.Tech. Lough.
FRENCH, FRENCH STUDIES	M.A. Aberd.; p B.A. Batt; p B.A., B.A. Belf.; p B.A., B.A., p B.Com. Birm.; B.A.? Brad.; p B.A., B.A. Brist.; B.A. Cantab.; p B.A., B.A. Dunelm.; B.A. E. Anglia; p M.A., M.A. Edin.; p B.A., B.A. Exet.; p M.A., M.A. Glas.; p B.A., B.A. Hull; p B.A. Keele; p B.A., B.A. Kent; p B.A., B.A. Lamp.; p B.A., B.A. Lanc.; p B.A.,

Subject**Degree and University****FRENCH,
FRENCH STUDIES**
(continued)

B.A. Leeds; p B.A., B.A., p B.Sc. Leic.; p B.A., B.A. Liv.; B.A. Lond. (Bed., Birk., K.C., Q.M.C., R.H.C., U.C., West.); p B.A., B.A., p B.Sc. Manc.; p B.A., B.A. Newc.; p B.A., B.A. Nott.; B.A. Oxon.; p B.A., B.A. Rdg.; p B.Sc. Salf.; p B.A., B.A. Sheff.; p B.A., B.A. S'ton; p M.A., M.A. St. A. (St. Salv.); B.A. Strath.; B.A. Sus.; p B.A., B.A. Wales (Aberyst., Bangor, Card., Swans.); B.A. Warw.

**FUEL SCIENCE OR
TECHNOLOGY**

B.Sc. Leeds; B.Sc.(Tech.) Sheff.; B.Sc. Wales (Card.).

GENETICS

p B.Sc. Birm.; B.A. Cantab.; p B.Sc. E. Anglia; B.Sc. Edin.; p B.Sc. Glas.; B.Sc. Liv.; p B.Sc. Newc.; p B.Sc. Sheff.; B.Sc. Sus.; p B.A. York.

GEOGRAPHY

M.A., B.Sc. Aberd.; B.A., B.Sc. Belf.; p B.A., B.A., B.Sc., p B.Soc.Sc. Birm.; p B.A.? Brad.; p B.A., B.A., B.Sc. Brist.; B.A. Cantab.; p B.A., B.A., p B.Sc., B.Sc. Dunelm.; M.A., B.Sc. Edin.; p B.A., B.A., B.A. Soc. Stud., B.Sc. Exet.; p M.A., M.A., B.Sc. Glas.; p B.A., B.A., p B.Sc., B.Sc. Hull; p B.A. Keele; B.A. Lamp.; p B.A., B.A., B.Sc. Leeds; p B.A., B.A., p B.Sc., B.Sc. Leic.; p B.A., B.A., B.Sc. Liv.; B.A., p B.Sc., B.Sc. Lond. (Bed., Birk., K.C., L.S.E. (& B.Sc. (Econ.)), Q.M.C., U.C.); B.A., p B.Sc., B.Sc. Manc.; p B.A., B.A., p B.Sc., B.Sc. Newc.; B.A., B.Sc. Nott.; B.A. Oxon.; B.A., B.Sc. Rdg.; p B.Sc. Salf.; p B.A., B.A., p B.A.(Econ.), B.A.(Econ.), p B.Sc., B.Sc. Sheff.; p B.A., B.A., p B.Sc.(Soc.Sci.), p B.Sc., B.Sc. S'ton; M.A. St. A. (Queen's, St. Salv.); B.A. Strath.; B.A., B.Sc. Sus.; B.A., B.Sc. Wales (Aberyst., Swans.).

GEOLOGY

B.Sc. Aberd.; B.Sc. Aston; B.Sc. Belf.; B.Sc. Birm.; B.Sc. Brist.; B.A. Cantab.; p B.Sc., B.Sc. Chel.; B.Sc. Dunelm.; B.Sc. Edin.; B.Sc. Exet.; B.Sc. Glas.; p B.Sc., B.Sc. Hull.; p B.A. Keele; p B.Sc. Leeds; p B.A., p B.Sc., B.Sc. Leic.; B.Sc. Liv.; B.Sc. Lond. (Bed., Birk., Imp. (& A.R.S.M.), Imp. (& A.R.C.S.), K.C., Q.M.C., U.C.); p B.Sc., B.Sc. Manc.; p B.Sc., B.Sc. Newc.; p B.Sc., B.Sc. Nott.; B.A. Oxon.; B.Sc. Rdg.; B.Sc. Sheff.; B.Sc. S'ton; B.Sc. St. A. (St. Salv.); p B.Sc., B.Sc. Wales (Aberyst., Card., Swans.).

**GERMAN,
GERMAN STUDIES**

p M.A., M.A. Aberd.; p B.Sc. Batt.; B.A. Belf.; p B.A., B.A., p B.Com. Birm.; B.A.? Brad.; p B.A., B.A. Brist.; B.A. Cantab.; p B.A., B.A. Dunelm.; B.A. E. Anglia; M.A. Edin.; p B.A., B.A. Exet.; p M.A., M.A. Glas.; p B.A., B.A. Hull; p B.A. Keele; p B.A., B.A. Kent; p B.A., B.A. Lamp.; B.A. Leeds; p B.A., B.A., p B.Sc. Leic.; p B.A., B.A. Liv.; B.A. Lond. (Bed., Birk., K.C., Q.M.C., R.H.C., U.C., West.); p B.A., B.A., p B.Sc. Manc.; p B.A., B.A. Newc.; B.A.

Subject	Degree and University
GERMAN, GERMAN STUDIES (continued)	Nott.; B.A. Oxon.; p B.A., B.A. Rdg.; p B.Sc. Salf.; p B.A., B.A. Sheff.; p B.A., B.A. S'ton; p M.A., M.A. St. A. (St. Salv.); B.A. Strath.; B.A. Sus.; p B.A., B.A. Wales (Aberyst., Bangor, Card., Swans.).
GLASS TECHNOLOGY	B.Sc.Tech. Sheff.
GOVERNMENT	B.A. Essex; p B.A., B.A. Exet.; B.Sc.(Econ.) Lond. (L.S.E.); p B.A., B.A.(Econ.) Sheff.; B.Sc.Econ. Wales (Card.).
GREEK (CLASSICAL)	p M.A., M.A. Aberd.; B.A. Belf.; p B.A., B.A. Birm.; p B.A., B.A. Brist.; p M.A. Edin.; p B.A., B.A. Exet.; p M.A. Glas.; p B.A., B.A. Hull; p B.A. Keele; p B.A., B.A. Lamp.; p B.A. Lanc.; B.A. Leeds; p B.A., B.A. Leic.; B.A. Liv.; p B.A., B.A. Lond. (Bed., Birk., K.C., Q.M.C., R.H.C., U.C., West.); p B.A., B.A. Manc.; p B.A. Newc.; B.A. Nott.; B.A. Oxon.; B.A. Rdg.; p B.A., B.A. Sheff.; p B.A., B.A. S'ton; p M.A. St. A. (St. Salv.); B.A. Wales (Aberyst., Bangor, Card., Swans.).
GREEK (MODERN)	p B.A., p B.Com. Birm.; B.A. Cantab.; B.A. Oxon.
GUJARATI	B.A. Lond. (S.O.A.S.).
HAUSA	B.A. Lond. (S.O.A.S.).
HEBREW	p B.A. Cantab.; B.A. Dunelm.; p M.A. Glas.; p B.A. Leeds; B.A. Liv.; B.A. Lond. (U.C.); p M.A. St. A. (St. Salv.); B.A. Wales (Bangor, Card.).
HEBREW (MODERN)	p B.A., B.A. Lond. (S.O.A.S.); B.A. Oxon.
HINDI	B.A. Lond. (S.O.A.S.).
HISPANIC STUDIES	M.A. Edin.; p M.A. Glas.; p B.A., B.A. Liv.; M.A. St. A. (St. Salv.); B.A. Wales (Card.).
HISTORY, HISTORICAL STUDIES	p M.A., M.A. Aberd.; B.A. Belf.; p B.A., B.A., p B.Soc.Sc. Birm.; p B.A.? Brad.; p B.A., B.A. Brist.; B.A. Cantab.; B.A. Dunelm.; B.A. E. Anglia; p M.A., M.A. Edin.; p B.A., B.A. Exet.; M.A. Glas.; B.A. Hull; p B.A. Keele; p B.A., B.A. Kent; p B.A., B.A. Lamp.; B.A. Lanc.; p B.A., B.A. Leeds; p B.A., B.A., p B.Sc. Leic.; p B.A., B.A. Liv.; B.A. Lond. (Bed., K.C., L.S.E., Q.M.C., R.H.C., S.E.E.S., S.O.A.S., U.C., West.); B.A. Manc.; B.A. Newc.; B.A. Nott.; B.A. Oxon.; p B.A., B.A. Rdg.; B.A. Sheff.; p B.A., B.A. S'ton; M.A. St. A. (St. Salv.); B.A. Sus.; p B.A., B.A. Wales (Aberyst., Bangor, Card., Swans.); B.A. Warw.; p B.A. Welsh; p B.A., B.A. York.
African History	B.A. Lond. (S.O.A.S.); B.A. Sus.

<u>Subject</u>	<u>Degree and University</u>
Ancient History	p B.A., B.A. Belf.; B.A. Birm.; p B.A. Brist.; p B.A. Exet.; p B.A. Leic.; B.A. Lond. (U.C.); p B.A. Manc.; p B.A. Newc.; p B.A. Oxon.; p B.A. Rdg.; p B.A. Sheff.; M.A. St. A. (St. Salv.).
Economic History	M.A. Aberd.; B.A. Belf.; p B.Com., p B.Soc.Sc. Birm.; p B.A. Brist.; p B.A. Dunelm.; B.A. E. Anglia; M.A. Edin.; p B.A., B.A. Exet.; p M.A. Glas.; B.A. Hull; p B.A., B.A. Kent; p B.A. Leeds; p B.A., B.A., p B.Sc. Leic.; B.Sc.(Econ.) Lond. (L.S.E., U.C.); B.A. Lond. (U.C.); B.A.(Econ.) Manc.; p B.A., B.A. Nott.; p B.A. (Econ.), B.A.(Econ.) Sheff.; p B.Sc.(Soc.Sci.) S'ton; p M.A. St. A. (Queen's); B.A. Strath.; p B.Sc.Econ. Wales (Aberyst., Card.); p B.A. Warw.; p B.A. Welsh.
European History	p B.A. Exet.; p B.A. Lond. (S.E.E.S.); p B.A. Sheff. (Prehistory).
Far Eastern and South-East Asian History	p B.A. Lond. (S.O.A.S.); B.A. Sus.
Indian History	p B.A. Lond. (S.O.A.S.).
International History	B.Sc.(Econ.) Lond. (L.S.E.).
Islamic History	p B.A. Lond. (S.O.A.S.).
Mediaeval History	B.A. Belf.; B.A. Birm.; p M.A. Glas.; p B.A. Hull; B.A. Liv.; B.A. Lond. (U.C.); B.A. Nott.; p B.A. Rdg.; p B.A. S'ton; p M.A., M.A. St. A. (St. Salv.).
Modern History	B.A. Belf.; B.A. Birm.; B.A. Dunelm.; p M.A. Edin.; p M.A. Glas.; p B.A. Hull; p B.A. Lanc.; B.A. Liv.; B.A. Lond. (U.C.); p B.A. Manc.; p B.A., B.A. Newc.; B.A. Nott.; B.A. Oxon.; p B.A. Rdg.; p B.A., B.A., p B.A.(Econ.) Sheff.; p B.A. S'ton; p M.A., M.A. St. A. (Queen's, St. Salv.); p B.A., B.A. Wales (Swans.).
Near and Middle Eastern History	B.A. Lond. (S.O.A.S.).
Political History	p B.A. Exet.; p B.A. Warw.
Scottish History	M.A. Edin.; p M.A. Glas.
Welsh History	p B.A., B.A. Wales (Aberyst., Bangor, Card.).
HISTORY OF ART	p B.A. Brist.; B.A. E. Anglia; p M.A. Glas.; B.A. Lond. (C.I.); p B.A. Manc.; p B.A. Newc.; B.A. Nott.
HORTICULTURE	B.Sc. Bath; B.Sc.(Hort.) Lond. (Wye); p B.Sc., B.Sc. Nott.; B.Sc. Rdg.
Horticultural Botany	B.Sc. Rdg.
Horticultural Science	B.Sc. Rdg.
HOTEL AND CATERING ADMINISTRATION	B.Sc. Batt.; B.Sc. Strath.
HOUSEHOLD SCIENCE	B.Sc. (Household Science) Lond. (Q.E.C.).
HUMAN BIOLOGY	B.Sc. Batt.; B.Sc. Sheff. (and Anatomy).

<u>Subject</u>	<u>Degree and University</u>
HUMAN AND PHYSICAL SCIENCES	B.Sc. Batt.
HUMAN RELATIONS	B.Sc. Batt.
HUMANITIES AND TECHNOLOGY	B.Tech. Lough.
HUNGARIAN	B.A. Cantab.; B.A. Lond. (S.E.E.S.).
INDIAN STUDIES	B.A. Cantab.
INDONESIAN	p B.A. Lond. (S.O.A.S.).
INDUSTRIAL RELATIONS	p B.Sc. Salf.; B.A. Strath.; p B.Sc.Econ. Wales (Card.).
INDUSTRY AND TRADE	B.Sc.(Econ.) Lond. (L.S.E.); p B.A. Warw.; B.Sc.(Tech.) Welsh.
INTERNATIONAL RELATIONS	p M.A. Aberd.; p B.Sc. Batt.; B.A. Keele; B.Sc.(Econ.) Lond. (L.S.E., U.C.); B.A. Sus.
INTERNATIONAL STUDIES	p B.Sc.(Soc.Sci.) S'ton.
ISLAMIC	p B.A. Dunelm.; p B.A. Lond. (Islamic Hist.) (S.O.A.S.).
ITALIAN, ITALIAN STUDIES	p M.A., M.A. Aberd.; p B.A., B.A., p B.Com. Birm.; p B.A. Brist.; B.A. Cantab.; M.A. Edin.; p B.A. Exet.; p M.A. Glas.; p B.A. Hull; p B.A., B.A. Leeds; p B.A., B.A. Liv.; B.A. Lond. (Bed., U.C.); p B.A., B.A. Manc.; B.A. Oxon.; p B.A., B.A. Rdg.; p B.Sc. Salf.; p B.A. Wales (Aberyst., Card., Swans.).
ITALIAN RENASCENCE STUDIES	B.A. Birm.
JAPANESE, JAPANESE STUDIES	B.A. Cantab.; B.A. Lond. (S.O.A.S.); B.A. Oxon.
JURISPRUDENCE	p M.A. Aberd.; B.A. Oxon.; B.Jur. Sheff.
KOREAN	p B.A. Lond. (S.O.A.S.).
LABOUR IN INDUSTRY	B.Sc.(Econ.) Hull.
LAND USE, LAND ECONOMY	B.A. Cantab.; B.A. Dunelm.; B.Sc. Edin.; B.A. Newc.
LATIN	p M.A. Aberd.; p B.A., B.A. Belf.; p B.A., B.A. Birm.; p B.A., B.A. Brist.; p B.A. Cantab.; p B.A. Dunelm.; p M.A. Edin.; p B.A., B.A. Exet.; p M.A. Glas.; p B.A., B.A. Hull; p B.A. Keele; p B.A. Kent; p B.A., B.A. Lamp.; p B.A. Lanc.; p B.A., B.A. Leeds; p B.A., B.A. Leic.; p B.A., B.A. Liv.; B.A. Lond. (Bed., Birk., K.C., Q.M.C., R.H.C., U.C., West.); p B.A., B.A. Manc.; p B.A., B.A. Newc.; p B.A., B.A. Nott.; B.A. Oxon.; p B.A., B.A. Rdg.; p B.A., B.A. Sheff.; p B.A., B.A. S'ton; p M.A. St. A. (St. Salv.); p B.A., B.A. Wales (Aberyst., Bangor, Card., Swans.).

<u>Subject</u>	<u>Degree and University</u>
LATIN-AMERICAN STUDIES	p B.A. Birm.; p B.A. Brist.; p B.A. Cantab.; Bangor, Card., Swans.). p M.A. Edin.; B.A. Essex; p M.A. Glas.; p B.A. Leeds; B.A. Liv.; p B.A. Lond.; p B.A. Manc.; B.A. Newc.; p B.A. Oxon.; p B.A. Sheff.; p B.A. S'ton; p B.A. Wales (Aberyst.).
LAW	LL.B., M.A. & LL.B. Aberd.; LL.B. Belf.; LL.B. Birm.; p B.A., LL.B. Brist.; B.A. Cantab.; p B.A. Dunelm.; LL.B., M.A. & LL.B. Edin.; p B.A., LL.B. Exet.; LL.B. Glas.; p B.A., LL.B. Hull; p B.A. Keele; p B.A., B.A. Kent; p B.Com., LL.B. Leeds; LL.B. Leic.; LL.B. Liv.; LL.B. Lond. (K.C., L.S.E., Q.M.C., U.C.); LL.B. Manc.; LL.B. Newc.; B.A., LL.B. Nott.; B.A. Oxon.; p B.A.(Econ.), LL.B. Sheff.; LL.B. S'ton; LL.B. St. A. (Queen's); M.A. & LL.B. St. A. (St. Salv.); B.A. Strath.; LL.B. Wales (Aberyst., Welsh); p B.Sc.Econ. Wales (Card.); B.A. Warw.
Commercial Law	p B.A. Brist.
Constitutional Law	p B.A. Brist.
LEATHER SCIENCE	B.Sc. Leeds.
LINGUISTIC AND REGIONAL STUDIES	B.Sc. Batt.
LINGUISTICS	p M.A. Edin.; p B.A. Lond. (S.O.A.S.); p B.A. York.
LITERATURE, ANCIENT AND MODERN	B.A. Birm.; B.A. Essex.
LOGIC	p B.A. Birm.; p B.Sc. Leic.; p M.A. St. A. (St. Salv.).
MALAY	B.A. Lond. (S.O.A.S.).
MANAGEMENT ENGINEERING	B.Sc. Bath; p B.Tech. Lough.
MANAGEMENT SCIENCE	B.A.? Brad.; p B.Tech. Lough.; p B.Sc. & A.M.C.S.T., B.Sc. & A.M.C.S.T. Manc.
MARATHI	B.A. Lond. (S.O.A.S.).
MARITIME STUDIES	B.Sc.(Tech.) Welsh.
MARKETING	B.A. Strath.
MATERIALS SCIENCE	B.Sc. Sus.; p B.Sc. Wales (Bangor); p B.Sc. Warw.
MATERIALS TECHNOLOGY	p B.Sc., B.Sc. Batt.; B.Tech. Brad.; B.Sc.Tech. Sheff.
MATHEMATICAL PHYSICS	B.Sc. Aston; B.Sc. Birm.; B.Sc. Edin.; B.Sc. Liv.; B.Sc. Sus.

Subject	Degree and University
MATHEMATICAL SOCIAL SCIENCE	B.A. Essex.
MATHEMATICS AND MATHEMATICAL STUDIES	p M.A., M.A., B.Sc. Aberd.; B.Sc. Aston; B.Sc. Bath; B.A., B.Sc. Belf.; p B.A., B.A., p B.Soc.Sc., p B.Sc., B.Sc. Birm.; p B.Sc.?, B.Tech. Brad.; p B.A., B.A., B.Sc. Brist.; B.Tech. Brun.; p B.A., B.A. Cantab.; p B.Sc., B.Sc. Chel.; B.A., p B.Sc., B.Sc. Dunelm.; B.Sc. E. Anglia; p M.A., B.Sc. Edin.; B.A. Essex; p B.A., B.Sc. Exet.; p M.A., B.Sc. Glas.; B.Sc. H.-W.; p B.A., p B.Sc., B.Sc. Hull; p B.A. Keele; B.Sc. Kent; p B.A. Lamp.; B.A. Lanc.; p B.A., B.A., p B.Sc., B.Sc. Leeds; p B.A., B.A., p B.Sc., B.Sc. Leic.; p B.A., B.A., B.Sc. Liv.; B.A. Lond. (Bed., Birk., K.C., Q.M.C., R.H.C., U.C.); p B.Sc., B.Sc. Lond. (Bed., Birk., Imp., K.C., Q.E.C., Q.M.C., R.H.C., U.C., West.); p B.Sc.(Econ.) Lond. (L.S.E.); B.Tech. Lough.; B.A., p B.Sc., B.Sc., B.Sc. & A.M.C.S.T. Manc.; p B.A., p B.Sc., B.Sc. Newc.; B.Sc. North.; p B.A., B.A., p B.Sc., B.Sc. Nott.; B.A. Oxon.; B.A., B.Sc. Rdg.; p B.Sc., B.Sc. Salf.; p B.A., B.A., p B.A.(Econ.), p B.Sc., B.Sc. Sheff.; B.A., p B.Sc. S'ton; p M.A., B.Sc. St. A. (Queen's, St. Salv.); B.Sc. Strath.; B.A., B.Sc. Sus.; p B.A., B.A., p B.Sc., B.Sc. Wales (Aberyst., Bangor, Card., Swans.); p B.A., B.A., B.Sc. Warw.; p B.Sc. Welsh; p B.A., B.A. York.
Mathematics, Industrial, Technological	B.Sc. Aston; B.Sc. Batt.; B.Sc.? Brad.; B.Sc. (Tech.) Welsh.
MECHANICAL SCIENCES	B.A. Cantab.
MECHANICS, APPLIED	B.Sc. Rdg.
MECHANICS, FLUID	B.Eng. Liv.
MECHANICS, THEORETICAL	B.Sc. Nott.
MEDIAEVAL LANGUAGES	B.A. Belf.; p B.A. Cantab.
MEDIAEVAL STUDIES	B.A. Belf.; B.A. Manc.; p B.A. Rdg.
MEDICAL BIOCHEMISTRY	B.Sc. Birm.
MEDICINE AND SURGERY	M.B., Ch.B., M.A. or B.Sc. & M.B., Ch.B. Aberd.; M.B., B.Ch., B.A.O. Belf.; M.B., Ch.B. Birm.; M.B., Ch.B. Brist.; M.B., B.Chir. Cantab.; M.B., Ch.B. Edin.; M.B., Ch.B. Glas.; M.B., Ch.B. Leeds; M.B., Ch.B. Liv.; M.B., B.S. Lond. (K.C., U.C., Charing Cross Hosp., Guy's Hosp., London Hosp., Middlesex Hosp., Royal Free Hosp., St. Bartholomew's Hosp., St. Mary's Hosp., St. Thomas's Hosp. Medical Schools); M.B., Ch.B. Manc.; M.B., B.S. Newc.; B.M., B.Ch. Oxon.; M.B., Ch.B. Sheff.; M.B., Ch.B. St. A. (Queen's, St. Salv.); M.B., B.Ch. Wales (Welsh National School of Medicine).

<u>Subject</u>	<u>Degree and University</u>
MENTAL PHILOSOPHY	M.A. Aberd.; M.A. Glas.
METALLURGY	B.Sc. Aston; B.Sc. Birm.; B.Tech. Brun.; B.A. Cantab.; B.Sc. Leeds; B.Sc. Liv.; p B.Sc., B.Sc. & A.M.C.S.T. Manc.; B.Sc. Newc.; p B.Sc., B.Sc. Nott.; B.A. Oxon.; p B.Sc. Rdg.; B.Met. Sheff.; B.Sc. Strath.; p B.Sc., B.Sc. Wales (Card., Swans.).
METEOROLOGY	p B.Sc. Edin.; B.Sc. Rdg.
MICROBIOLOGY	B.Sc. Batt.; B.Sc. Belf.; B.Sc. Birm.; B.Sc. Brist.; B.Sc. E. Anglia; B.Sc. Lond. (Q.E.C., U.C.); B.Sc. Rdg.; p B.Sc. Sheff.; B.Sc. St. A. (Queen's); B.Sc. Strath.; B.Sc. Sus.; B.Sc. Wales (Card.); p B.Sc. Wales (Card., Swans.); p B.A. York.
MIDDLE EASTERN STUDIES	B.A. Dunelm.
MINERAL SCIENCES	B.A. Cantab.; B.Sc. Leeds.
MINERAL TECHNOLOGY	B.Sc.(Eng.) & A.R.S.M. Lond. (Imp.).
MINING AND MINING ENGINEERING	B.Sc. Birm.; B.Sc. Edin.; B.Sc. H.-W.; B.Sc. Leeds; B.Sc.(Eng.) & A.R.S.M. Lond. (Imp.); B.Sc. Newc.; p B.Sc., B.Sc. Nott.; B.Sc. Strath.; B.Sc. Wales (Card.).
MINING GEOLOGY	B.Sc.(Eng.) & A.R.S.M. Lond. (Imp.).
MODERN LANGUAGES	B.A.? Brad.; B.A. Cantab.; M.A. Edin.; B.A. Kent; B.A. Leeds; B.A. Manc.; B.A. Oxon.; B.Sc. Salf.; B.A. Sheff.; B.A. Strath.
MODERN MATHEMATICS	B.Sc. Batt.
MODERN STUDIES	B.A. Brist.
MOLECULAR SCIENCES	B.Sc. Sus.; B.Sc. Warw.
MONGOLIAN	p B.A. Lond. (S.O.A.S.).
MONGOL AND PERSIAN	B.A. Cantab.
MUSIC (as an Arts subject)	M.A. Aberd.; p B.A., B.A. Belf.; p B.A. Birm.; p B.A., B.A. Brist.; B.A. Cantab.; B.A. Dunelm.; B.A. E. Anglia; p B.A. Exet.; p M.A. Glas.; p B.A., B.A. Hull; p B.A., B.A. Leeds; p B.Sc. Leic.; B.A. Liv.; p B.A. Lond. (R.H.C.); B.A.(Mus.) Manc.; p B.A., B.A. Newc.; B.A. Nott.; B.A. Oxon.; p B.A., B.A. Rdg.; p B.A., B.A. Sheff.; p B.A., B.A. S'ton; B.A. Wales (Aberyst., Bangor, Card.); p B.A. York.
MUSIC (B.Mus.)	B.Mus. Belf.; B.Mus. Birm.; B.Mus. Dunelm.; B.Mus. Edin.; B.Mus. Glas.; B.Mus. Liv.; B.Mus. Lond. (K.C., Royal Academy of Music, Royal College of Music, Trinity College of Music); Mus.B. Manc.; B.Mus. Nott.; B.Mus., B.A. & B.Mus. Sheff.; B.Mus. Wales (Aberyst., Bangor, Card.).

<u>Subject</u>	<u>Degree and University</u>
MUSIC, HISTORY OF	B.A. E. Anglia.
NATURAL SCIENCES	B.A. Cantab.; B.A. Oxon.
NAVAL ARCHITECTURE	B.Sc. Glas.; B.Sc. Newc.; B.Sc. Strath.
NORWEGIAN	p M.A. Glas.; p B.A. Newc.
NUMERICAL ANALYSIS	p B.Sc. Salf.
NURSING STUDIES	B.Sc. with Nursing Studies Batt.; M.A. or B.Sc. with Nursing Studies Edin.
NUTRITION	B.Sc.(Nutrition) Lond. (Q.E.C.).
OCEANOGRAPHY	B.Sc. Liv.; p B.Sc. Wales (Bangor).
OIL TECHNOLOGY	B.Sc. & A.R.S.M. Lond. (Imp.).
OPERATIONAL/ OPERATIONS RESEARCH	p B.A. Lanc.; p B.Sc. Salf.
OPHTHALMIC OPTICS	B.Sc. Aston; B.Sc. & A.M.C.S.T. Manc.; B.Sc. North.; B.Sc. Welsh.
ORIENTAL STUDIES	B.A. Cantab.; B.A. Dunelm.; B.A. Liv.; B.A. Lond. (S.O.A.S.); B.A. Manc.; B.A. Oxon.
PALI	B.A. Lond. (S.O.A.S.).
PAPER SCIENCE	B.Sc. & A.M.C.S.T. Manc.
PATHOLOGY	B.A. Cantab.; p B.Sc. Glas.
PERSIAN	p B.A. Cantab.; p B.A. Dunelm.; p M.A. Edin.; B.A. Lond. (S.O.A.S.); B.A. Oxon.
PERSONNEL ADMINISTRATION	B.A. Strath.
PETROLOGY	p B.A. Cantab.
PHARMACOLOGY	B.Sc. Belf.; B.Sc. Chel.; B.Sc. Edin.; B.Sc. Glas.; B.Sc. Leeds; B.Sc. Liv.; B.Sc. Lond. (U.C.); p B.Sc. Manc.; B.Sc. St. A. (Queen's).
PHARMACY	B.Sc. Aston; B.Pharm. Bath; B.Sc.? Brad.; B.Pharm. Chel.; B.Sc.? H.-W.; B.Sc. Leeds; B.Pharm. Lond. (S.P.); B.Sc. Manc.; B.Pharm. Nott.; B.Sc. Strath.; B.Pharm. Wales (Card.); B.Pharm & Ph.C. Welsh.
PHILOSOPHICAL THEOLOGY	B.A. Hull.
PHILOSOPHY	p M.A. Aberd.; p B.A., B.A. Belf.; p B.A., B.A., p B.Soc.Sc. Birm.; p B.A., B.A. Brist.; B.A. Cantab.; p B.A., B.A. Dunelm.; B.A. E. Anglia; M.A. Edin.; p B.A., B.A. Exet.; p M.A., M.A. Glas.; p B.A., B.A., p B.Sc., B.Sc. Hull; p B.A. Keele; p B.A. Kent; p B.A., B.A. Lamp.; p B.A., B.A. Lanc.; p B.A., B.A. Leeds; p B.A., p B.Sc. Leic.; p B.A., B.A. Liv.; p B.A., B.A.

Subject**Degree and University****PHILOSOPHY**

(continued)

Lond. (Bed., Birk., K.C., U.C.); p B.A., B.Sc. (Econ.) Lond. (L.S.E.); p B.A., B.A., p B.Sc. Manc.; p B.A., B.A. Newc.; p B.A., B.A., p B.Sc. Nott.; p B.A. Oxon.; p B.A., B.A. Rdg.; p B.A., B.A., p B.A. (Econ.) Sheff.; p B.A., B.A. S'ton; p M.A. St. A. (St. Salv.); M.A. St. A. (Queen's); B.A., p B.Sc. Sus.; B.A. Wales (Aberyst., Bangor, Card., Swans.); p B.A. Wales (Bangor); p B.Sc. Wales (Aberyst., Bangor); B.Sc. Wales (Aberyst., Bangor, Card., Swans.); p B.Sc. Econ. Wales (Card.); p B.A., B.A. Warw.; p B.A. Welsh; p B.A. York.

PHONETICS

p M.A. Edin.

PHYSICAL EDUCATION

p B.A. Birm.

**PHYSICAL PROPERTIES
OF MATERIALS**

B.Sc. Rdg.

PHYSICS

p M.A., B.Sc. Aberd.; B.Sc. Aston; B.Sc. Batt.; B.Sc. Belf.; B.Sc. Birm.; B.Sc. Brist.; p B.A., B.A. Cantab.; p B.Sc., B.Sc. Chel.; p B.Sc., B.Sc. Dunelm.; B.Sc. E. Anglia; p M.A., B.Sc. Edin.; B.A. Essex; p B.Sc., B.Sc. Exet.; p M.A., p B.Sc., B.Sc. Glas.; p B.Sc., B.Sc. Hull; p B.A. Keele; B.Sc. Kent; B.A. Lanc.; p B.Sc., B.Sc. Leeds; p B.Sc., B.Sc. Leic.; B.Sc. Liv.; p B.Sc., B.Sc. Lond. (Bed., Imp. (& A.R.C.S.), K.C., Q.E.C., Q.M.C., R.H.C., U.C., West.); B.Tech. Lough.; p B.Sc., B.Sc., B.Sc. & A.M.C.S.T. Manc.; p B.Sc., B.Sc. Newc.; p B.Sc., B.Sc. Nott.; B.A. Oxon.; B.Sc. Rdg.; p B.Sc., B.Sc. Salf.; p B.Sc., B.Sc. Sheff.; B.Sc. S'ton; p M.A. St. A. (St. Salv.); B.Sc. St. A. (Queen's, St. Salv.); B.Sc. Strath.; B.Sc. Sus.; p B.Sc., B.Sc. Wales (Aberyst., Bangor, Card., Swans.); B.Sc. Warw.; p B.Sc. Welsh; p B.A., B.A. York.

Applied Physics

B.Sc. Aston; B.Sc. Bath; B.Tech. Brad.; B.Tech. Brun.; p B.Sc., B.Sc. Dunelm.; B.Sc. H.-W.; B.Sc. Hull; B.A. Lanc.; B.Sc. North.; B.Sc. Salf.; B.Sc. Sus.; B.Sc. (Tech.) Welsh.

Theoretical Physics

B.A. Cantab.; B.A. Essex; B.A. Lanc.; p B.Sc. St. A. (St. Salv.); p B.Sc. Warw.

**PHYSIOLOGICAL
CHEMISTRY**

B.Sc. Rdg.

PHYSIOLOGY

B.Sc. Aberd.; B.Sc. Belf.; B.Sc. Birm.; B.Sc. Brist.; B.A. Cantab.; p B.Sc., B.Sc. Chel.; B.Sc. Edin.; p B.Sc., B.Sc. Glas.; p B.Sc., B.Sc. Leeds; B.Sc. Liv.; p B.Sc., B.Sc. Lond. (Bed., Q.E.C., U.C.); p B.Sc., B.Sc. Manc.; p B.Sc., B.Sc. Newc.; p B.Sc. Nott.; p B.A. Oxon.; p B.Sc. Salf.; p B.Sc., B.Sc. Sheff.; p B.Sc. S'ton; B.Sc. St. A. (Queen's, St. Salv.); p B.Sc., B.Sc. Wales (Card.); p B.A. York.

PLANT PHYSIOLOGY

p B.Sc. E. Anglia; p B.Sc. Sus.

<u>Subject</u>	<u>Degree and University</u>
PLANT SCIENCE	p B.Sc. E. Anglia; B.Sc. Newc.
POLISH	B.A. Lond. (S.E.E.S.); p B.Sc. Salf.
POLITICAL ECONOMY	p M.A. Aberd.; p M.A. Glas.; p M.A. St. A.
POLITICAL THEORY (Greek and Roman)	p B.A. Lamp.
POLITICS	p M.A., M.A. Aberd.; p B.A. Belf.; p B.Com., p B.Soc.Sc., p B.A. Birm.; p B.A.? Brad.; p B.A. Brist.; p B.A. Cantab.; p B.A. Dunelm.; p M.A., M.A. Edin.; p M.A. Glas.; p B.A. Hull; p B.A. Keele; p B.A., B.A. Kent; p B.A., B.A. Lanc.; p B.A., B.A. Leeds; p B.A., B.A., p B.Sc. Leic.; p B.A., B.A. Liv.; p B.A., B.A.(Econ.) Manc.; p B.A. Newc.; B.A. Nott.; p B.A. Oxon.; p B.A. Rdg.; p B.Sc. Salf.; p B.A.(Econ.), B.A.(Econ.) Sheff.; p B.A., p B.Sc.(Soc.Sci.) S'ton; M.A. St. A. (Queen's); B.A. Strath.; p B.A. Sus.; p B.Sc.Econ. Wales (Aberyst.); p B.A., B.A. Wales (Swans.); p B.A. Warw.; p B.A. Welsh; p B.A., B.A. York.
POLYMER TECHNOLOGY	p B.Sc. Belf.; B.Sc. & A.M.C.S.T. Manc.; p B.Sc. Strath.
PORTUGUESE	p B.A. Belf.; p B.A. Birm.; p B.A. Brist.; B.A. Cantab.; p B.A. Dunelm.; M.A. Glas.; p B.A. Leeds; B.A. Liv.; B.A. Lond. (K.C.); p B.A. Manc.; p B.A. Newc.; B.A. Oxon.; p B.A. Sheff.; p B.A. S'ton; B.A. Wales (Card.).
PRODUCTION TECHNOLOGY	B.Sc. Bath; p B.Tech., B.Tech. Brun.
PSYCHOLOGY	p M.A., B.Sc. Aberd.; B.Sc. Aston; p B.A., B.A., B.Sc. Belf.; p B.A., p B.Com., p B.Soc.Sc. Birm.; p B.A.?, B.A.? Brad.; p B.A., B.Sc. Brist.; B.Tech. Brun.; B.A. Cantab.; p B.A., B.A., p B.Sc., B.Sc. Dunelm.; M.A., B.Sc. Edin.; p B.A., B.A., B.Sc. Exet.; p M.A., M.A. Glas.; p B.A., B.A., p B.Sc., B.Sc. Hull; p B.A. Keele; p B.A., p B.Sc., B.Sc. Leeds; p B.A., B.A., p B.Sc. Leic.; p B.A., B.A., B.Sc. Liv.; p B.A., B.A., p B.Sc., B.Sc. Lond. (Bed., Birk., U.C.); B.A., p B.Sc., B.Sc. Manc.; p B.A. Newc.; B.A., p B.Sc., B.Sc. Nott.; p B.A. Oxon.; p B.A., B.A., B.Sc. Rdg.; p B.A., B.A., p B.A.(Econ.), B.A.(Econ.), B.Sc. Sheff.; B.Sc.(Soc.Sci.) S'ton; p M.A. St. A. (Queen's, St. Salv.); B.A. Strath.; B.A. Sus.; p B.A., B.A. Wales (Bangor, Card., Swans.); p B.Sc., B.Sc. Wales (Bangor, Card., Swans.); B.Sc.Econ. Wales (Card., Swans.); B.Sc.(Tech.) Welsh.
PUBLIC POLICY	p B.A. Warw.
QUARRYING	B.Sc. Wales (Card.).

Subject	Degree and University
REFRACTORIES TECHNOLOGY	p B.Sc.Tech. Sheff.
REGIONAL STUDIES	p B.A. ? Batt.; B.A. E. Anglia.
RELIGIOUS KNOWLEDGE/ STUDIES	p B.A. Brist.; B.A. Sus.
RUMANIAN	B.A. Lond. (S.E.E.S.).
RUSSIAN AND RUSSIAN STUDIES	p M.A., M.A. Aberd.; B.A. ? Batt.; p B.A., B.A., p B.Com., p B.Soc.Sc. Birm.; B.A. ? Brad.; p B.A. Brist.; B.A. Dunelm.; B.A. E. Anglia; M.A. Edin.; p B.A. Essex; p B.A., B.A. Exet.; p M.A. Glas.; p B.A. Hull; B.A. Lanc.; B.A. Leeds; p B.A. Leic.; p B.A., B.A. Liv.; B.A. Lond. (Q.M.C., S.E.E.S.); p B.A., B.A., p B.Sc. Manc.; p B.A., B.A. Nott.; B.A. Oxon.; p B.Sc. Salf.; p B.A. Sheff.; p M.A., M.A. St. A. (St. Salv.); B.A. Sus.; p B.A. Wales (Aberyst., Swans.).
SANSKRIT	p M.A. Edin.; p B.A., B.A. Lond. (S.O.A.S.); B.A. Oxon.
SCANDINAVIAN LANGUAGES/STUDIES	B.A. Cantab.; B.A. Lond. (U.C.); B.A. Newc.
SCHOLASTIC PHILOSOPHY	p B.A., B.A. Belf.
SCIENCE, GENERAL, COMBINED	B.Sc. Aberd.; B.Sc. Aston; B.Sc. Brist.; B.Sc. Chel.; B.Sc. Dunelm.; B.Sc. Edin.; B.Sc. Exet.; B.Sc. Glas.; B.Sc. Leeds; B.Sc. Leic.; B.Sc. Liv.; B.Sc. Lond. (Bed., K.C., Q.E.C., R.H.C., West.); B.Sc. Manc.; B.Sc. Newc.; B.Sc. Nott.; B.Sc. Rdg.; B.Sc. Salf.; B.Sc. Sheff.; B.Sc. S'ton; B.Sc. St. A. (Queen's, St. Salv.); B.Sc. Sus.; B.Sc. Wales (Aberyst., Bangor, Card., Swans.); B.Sc. Welsh.
SCIENCE, HISTORY AND PHILOSOPHY OF	p B.Sc. Aberd.; p B.Sc. Belf.; p B.Sc. Brist.; p B.A. Cantab.; p B.Sc. Dunelm.; p B.Sc. Exet.; p B.Sc. Hull; p B.A. Keele; p B.Sc. Leeds; p B.A., p B.Sc. Leic.; p B.A. Oxon.; p B.Sc. Sheff.; p B.Sc. S'ton; p B.Sc. Strath.; p B.Sc. Sus.
SCIENCE, THEORY OF	p B.Sc. Sus.
SCOTS LAW	LL.B. Aberd.; LL.B. Edin.; p M.A., LL.B. Glas.; p LL.B. St. A. (Queen's).
SECRETARIAL SCIENCE	B.A. Strath.
SEMITIC LANGUAGES/ STUDIES	M.A. Edin.; p M.A. Glas.; B.A. Leeds; p M.A. St. A. (St. Salv.).
SERBO-CROAT	B.A. Lond. (S.E.E.S.).
SINHALESE	B.A. Lond. (S.O.A.S.).
SLAVONIC SUBJECTS	B.A. Cantab.

<u>Subject</u>	<u>Degree and University</u>
SOCIAL ADMINISTRATION	B.A.(Econ.) Manc.; p B.A. Newc.; B.A. Nott.; p B.Sc.(Soc.Sci.) S'ton; B.A. Strath.; B.Sc.Econ. Wales (Card.); p B.Sc.Econ. Wales (Swans.).
SOCIAL ANALYSIS	B.A. Keele.
SOCIAL SCIENCES	p B.Soc.Sc. Birm.; B Tech. Brun.; M.A., B.Sc. (Social Science) Edin.; B.A. Kent; B.A. Leic.; B.A. Liv.; M.A. St. A. (Queen's); p B.A. York.
SOCIAL STATISTICS	p B.Soc.Sc. Birm.
SOCIAL STUDIES	B.A.? Batt.; p B.A., p B.Soc.Sc. Birm.; B.A.? Brad.; B.A. Dunelm.; B.A. Essex; B.A. Exet.; B.A. Hull; p B.A. Keele; B.A. Liv.; B.A.(S.S.) Newc.; B.Sc. Salf.
SOCIAL THEORY AND ADMINISTRATION	B.A. Dunelm.
SOCIOLOGY	M.A. Aberd.; B.Sc. Aston; B.Sc. Bath; p B.Soc.Sc., p B.A. Birm.; p B.A.? Brad.; p B.A. Brist.; p B.A. Cantab.; B.A. E. Anglia; p M.A., M.A. Edin.; B.A. Essex; p B.A., B.A. Exet.; p M.A. Glas.; p B.A. Hull; p B.A., B.A. Kent; p B.A., B.A. Leeds; p B.A., B.A., p B.Sc. Leic.; B.A., B.Sc.(Soc.) Lond. (Bed., L.S.E.); B.Sc. (Econ.) Lond. (L.S.E.); p B.A.(Econ.) Manc.; B.A. Nott.; p B.A., B.A. Rdg.; p B.Sc. Salf.; p B.A.(Econ.), B.A.(Econ.) Sheff.; p B.Sc.(Soc. Sci.) S'ton; B.A. Strath.; p B.A., B.A. Sus.; p B.Sc.Econ. Wales (Aberyst., Card., Swans.); p B.A. Warw.; p B.A., B.A. York.
SOIL SCIENCE	B.Sc. Aberd.; B.Sc. Newc.; B.Sc. Nott.; B.Sc. Rdg.
SOTHO	B.A. Lond. (S.O.A.S.).
SOUTH-EAST ASIAN STUDIES	B.A. Lond. (S.O.A.S.).
SOUTH-EAST EUROPEAN STUDIES	B.A. Lond. (S.E.E.S.).
SOVIET STUDIES	B.A.? Batt.; p B.Sc.Econ. Wales (Swans.).
SPANISH AND SPANISH STUDIES	p M.A., M.A. Aberd.; B.A. Belf.; p B.A., B.A. Birm.; B.A.? Brad.; p B.A., B.A. Brist.; B.A. Cantab.; p B.A., B.A. Dunelm.; M.A. Edin.; p B.A. Essex; p B.A., B.A. Exet.; p B.A., B.A. Hull; p B.A., B.A. Leeds; B.A. Liv.; B.A. Lond. (Birk., K.C., Q.M.C., West.); p B.A., B.A. Manc.; p B.A., B.A. Newc.; p B.A., B.A. Nott.; B.A. Oxon.; p B.Sc. Salf.; p B.A., B.A. Sheff.; p B.A., B.A. S'ton; p M.A. St. A. (St. Salv.); B.A. Strath.; p B.A. Wales (Aberyst., Card.).
SPEECH	B.Ed.(Speech) Newc.

Subject	Degree and University
STATISTICS	B.Sc. Bath; B.Sc. Belf.; p B.Soc.Sc., p B.Sc. Birm.; p B.Sc.?, B.Tech. Brad.; p B.A. Brist.; p B.Sc. Chel.; p B.A., p B.Sc. Exet.; p M.A. Glas.; B.Sc.(Econ.) Hull; p B.A., p B.Sc. Leeds; B.Sc. Liv.; B.Sc.(Econ.) Lond. (L.S.E., U.C.); p B.Sc., B.Sc. Lond. (U.C.); B.A.(Econ.) Manc.; p B.Sc. Salf.; p B.A.(Econ.), p B.Sc., B.Sc. Sheff.; p B.Sc.(Soc.Sci.) S'ton; p M.A., p B.Sc., B.Sc. St. A. (Queen's, St. Salv.); p B.Sc., B.Sc., p B.Sc.Econ. Wales (Aberyst., Card.); B.Sc. (Tech.) Welsh; p B.A. York.
SURVEYING	p B.Sc. Newc.
SWAHILI	B.A. Lond. (S.O.A.S.).
SWEDISH AND SWEDISH STUDIES	p M.A., M.A. Aberd.; p B.A., B.A. Hull; p B.A. Newc.
TAMIL	B.A. Lond. (S.O.A.S.).
TAXONOMY	p B.A. York.
TECHNOLOGICAL MATHEMATICS	B.Sc. Batt.
TECHNOLOGY, HUMANITIES AND	B.Tech. Lough.
TEXTILE CHEMISTRY	B.Sc. Leeds; B.Sc. & A.M.C.S.T. Manc.
TEXTILE DESIGN	B.Sc.?, B.Tech. Brad.; B.A. Leeds.
TEXTILE ENGINEERING	B.Sc. Leeds; B.Sc. Manc.
TEXTILE INDUSTRIES	B.Sc. Leeds.
TEXTILE MANAGEMENT	B.A. Leeds.
TEXTILE PHYSICS	B.Sc. Leeds.
TEXTILE TECHNOLOGY	B.Sc.?, B.Tech. Brad.; B.Sc. & A.M.C.S.T. Manc.
TEXTILES	p B.Com. Leeds.
THAI (SIAMESE)	p B.A. Lond. (S.O.A.S.).
THEOLOGY	p B.A., B.A. Birm.; B.A. Brist.; B.A. Cantab.; B.A. Dunelm.; B.D. Edin.; B.A. Exet.; p B.A., B.A. Hull; p B.A., B.A. Lamp.; p B.A., B.A. Leeds; B.D. Lond. (K.C., New College, Richmond College); B.A.(Theol.), B.D. Manc.; p B.A., B.A. Newc.; p B.A., B.A. Nott.; B.A. Oxon.; p B.A. S'ton; B.D. St. A. (St. Mary's); B.A. Sus.
TIBETAN	p B.A. Lond. (S.O.A.S.).
TOWN AND COUNTRY PLANNING	B.A., B.Sc. Dunelm.; B.A. Manc.; B.A. Newc.; B.Arch. Sheff.; B.A. Welsh.
TURKISH	p B.A. Dunelm.; p M.A. Edin.; B.A. Lond. (S.O.A.S.).

<u>Subject</u>	<u>Degree and University</u>
URDU	B.A. Lond. (S.O.A.S.).
VETERINARY MEDICINE	B.V.Sc. Brist.; Vet.M.B. Cantab.; B.V.M. & S. Edin.; B.V.M.S. Glas.; B.V.Sc. Liv.; B.Vet.Med. Lond. (R.V.C.).
VIETNAMESE	p B.A. Lond. (S.O.A.S.).
WELSH	p B.A., B.A. Lamp.; B.A. Liv.; B.A. Wales (Aberyst., Bangor, Card., Swans.).
WILD LIFE MANAGEMENT	B.Sc. Edin.
ZOOLOGY	B.Sc., B.Sc.(Agr.) Aberd.; B.Sc. Aston; B.Sc. Belf.; B.Sc. Birm.; B.Sc. Brist.; B.A. Cantab.; p B.Sc., B.Sc. Chel.; p B.Sc., B.Sc. Dunelm.; B.Sc. E. Anglia; B.Sc. Edin.; B.Sc. Exet.; p B.Sc., B.Sc. Glas.; p B.Sc., B.Sc. Hull; p B.Sc., B.Sc. Leeds; p B.A., p B.Sc., B.Sc. Leic.; B.Sc. Liv., p B.Sc., B.Sc. Lond. (Bed., Imp., K.C., Q.E.C., Q.M.C., R.H.C., U.C., West.); p B.Sc., B.Sc. Manc.; p B.Sc., B.Sc. Newc.; p B.Sc., B.Sc. Nott.; B.A. Oxon.; B.Sc. Rdg.; p B.Sc. Salf.; p B.Sc., B.Sc. Sheff.; B.Sc. S'ton; B.Sc. St. A. (St. Salv.); p B.Sc., B.Sc. Wales (Aberyst., Bangor, Card., Swans.).
ZULU	p B.A. Lond. (S.O.A.S.).

Part 5

Membership of Professional
Associations

Membership of Professional Associations

Professional associations vary greatly in size and function. There are more than a hundred which qualify people by examinations as practitioners in a particular field. Other associations do not conduct examinations for membership, but accept the evidence provided by degrees, diplomas or the qualifications of other bodies. Some, which may be called study associations or learned societies, open their membership to amateurs as well as specialists.

This Part of the book is mainly concerned with membership of qualifying professional associations. A 'profession' is that kind of occupation in a special area of activity and offering a distinctive service which is followed by persons who have undertaken advanced training and education. People who wish to become members of professional associations must undertake progressive stages of instruction and practical experience before being examined for membership; in qualifying associations there is more than the simple membership structure often found in non-qualifying associations. Admission to 'corporate' membership, that is to the complete rights and privileges of full membership, marks the fact that the candidate has reached, by examination, the degree of competence required of practitioners. Once a member of a professional association, the candidate accepts certain responsibilities towards his clients, colleagues and the general public. He is usually allowed the use of designatory letters after his name.

THE FUNCTIONS OF PROFESSIONAL ASSOCIATIONS

QUALIFICATION

Some associations qualify individuals to act in a certain professional capacity. They also try to safeguard high standards of professional conduct. Few associations have complete control over

the profession with which they are concerned. Some professions are regulated by the law and their associations act as the central registration authority. Entry to others is directly controlled by associations which alone award the requisite qualifications (e.g. the Pharmaceutical Society). If a profession is required to be registered by the law and is controlled by a representative Council, a practitioner found guilty by his Council of misconduct may be suspended from practice or completely debarred by the removal of his name from the register of qualified practitioners. In other professions the consequences of misdemeanour may not be so serious because the profession does not exercise the same degree of control.

The professions registered by Statute, and therefore closed to persons not registered, are:

<u>Professions</u>	<u>Statutory Committee controlling professional conduct</u>
Architects	Architects Registration Council
Dentists	General Dental Council
Doctors	General Medical Council
Professions supplementary to Medicine	Council for Professions Supplementary to Medicine (separate Board for each)
Chiroprodists; Dietitians; Medical Laboratory Technicians; Occupational Therapists; Physiotherapists; Radiographers; Remedial Gymnasts.	
Midwives	Central Midwives Board
Nurses	General Nursing Council
Opticians	General Optical Council
Patent Agents	Council of the Chartered Institute of Patent Agents
Pharmacists	Statutory Committee of the Pharmaceutical Society
Solicitors	Statutory Committee of the Law Society

Certain other professions are closed. Admission to the Bar is controlled by the Inns of Court, although their powers have never been confirmed by Statute. Merchant Navy Officers are certificated by the Ministry of Transport and Mine Managers by the Board of Trade. No teacher may take up a permanent post in a maintained school unless his qualifications have been accepted by the Departments of Education; misconducting teachers are reprimanded or debarred by the Departments and not by the teaching profession. (There is now some movement towards self-government in the teaching profession in Scotland.)

Although some types of professional occupation are not controlled by statute, employment in them may nevertheless be fairly strictly controlled by convention. If a particular association is well enough confirmed and if its examinations are respected, employers may require applicants for appointment to certain posts either to have or to take its qualifications.

STUDY

Some associations give their members an opportunity to keep abreast of a particular discipline or to undertake further study in it. Such associations are especially numerous in medicine, science and applied science. Many qualifying associations also provide an information and study service for their members. Some of the more famous learned societies confer added status upon distinguished practitioners by electing them to membership or honorary membership.

PROTECTION OF MEMBERS' INTERESTS

Some associations exist mainly to look after the interests of the individual practitioner and the group. A small number are directly concerned with negotiations over salary and working conditions.

MEMBERSHIP OF PROFESSIONAL ASSOCIATIONS

QUALIFYING ASSOCIATIONS

The principal function of qualifying associations is to examine and qualify persons who wish to become practitioners in the field with which they are concerned. As already indicated, some regulate professional conduct and many offer opportunities for further study.

Membership is divided into grades, usually classified as 'corporate' and 'non-corporate'. Non-corporate members are those not yet admitted to full membership, mainly students; they are divided from corporate membership by barriers of age, and levels of responsibility and experience. The principal requirement for admission to membership is the knowledge and ability to pass the association's examinations; candidates may be exempted from the association's examinations if they have acceptable alternative qualifications.

NON-CORPORATE MEMBERS

Non-corporate members are those who are as yet unqualified or only partly qualified. They are accorded limited rights and privileges, but may not vote at meetings of the corporate body. Most associations have a 'Student' membership grade. Students are those who are preparing for the examinations which qualify them for admission to corporate membership. Some associations have 'Licentiate' and 'Graduate' membership grades, which are senior to the Student grade. Graduates are those who have passed the qualifying examinations, but lack other requirements, such as age and experience, for admission to corporate membership.

CORPORATE MEMBERS

Corporate members are the fully qualified, constituent members of incorporated associations. They are accorded full rights and privileges and may vote at meetings of the corporate body. Corporate membership is often divided into two grades, a senior grade of 'Members' or 'Fellows' and a general grade of 'Associate Members' or 'Associates'. Engineering institutions have tended to adopt the Member—Associate Member—Graduate—Student pattern (e.g. the Institution of Chemical Engineers: M.I.Chem.E., A.M.I.Chem.E., Grad.I.Chem.E., Stud.I.Chem.E.). Professional associations concerned with business and commerce have tended to adopt the Fellow—Associate—Student pattern (e.g. the Institute of Chartered Accountants: F.C.A., A.C.A., Student).

HONORARY MEMBERS

Some associations have a special class of honorary members or fellows for distinguished members or outsiders.

EXAMINATIONS AND REQUIREMENTS

Non-corporate members normally become corporate members by examination or exemption, with or without additional requirements. The level of many final professional examinations is of degree standard and a number of professional qualifications are accepted by the Burnham Committees on the salaries of teachers in maintained schools and colleges for the graduate addition to salary.

The transition from the general grade of membership (e.g. A.M.I.Chem.E.) to the senior (e.g. M.I.Chem.E.) is fairly automatic in some associations (e.g. on reaching a prescribed age), but

in others the higher grade is reached only after the submission of evidence of research or progress in the profession.

Qualifying examinations are usually conducted in two or more stages. The first stage leads to an Intermediate or Part I qualification, which is at about the standard of G.C.E. 'A' level or O.N.C. or O.N.D. The second stage leads to a Final or Part II or Part III qualification, which is at about the standard of a degree.

INSTRUCTION

Students may obtain instruction by any of the following means:

- (1) Correspondence courses.
- (2) Personal and postal instruction combined with a period of direct pupilage (as, for example, in the examinations conducted by the Royal Institution of Chartered Surveyors and Institute of Chartered Accountants).
- (3) Some associations maintain their own schools (e.g. the Architectural Association School, the Law Society's School of Law, the School of Pharmacy, the College of Insurance and the School of Welding Technology).
- (4) Courses of direct preparation in universities or colleges of further education.

Full details of the Qualifying Associations, including information on their examinations, awards and qualifications, can be found in Part 6 under the appropriate trades and professions.

STUDY ASSOCIATIONS—THE 'LEARNED SOCIETIES'

The study associations consist of persons who wish to increase their knowledge of a particular subject or range of subjects; they may be professionals or amateurs. Some associations consist almost entirely of specialists (e.g. the Chemical Society and Royal Statistical Society); others (e.g. the Royal Geographical Society and the Zoological Society of London) have a more general membership.

The learned societies usually have one grade of membership, fellows or members. Some also admit group members (such as schools or libraries), called corporate members, and junior, associate, corresponding and overseas members, who pay lower subscriptions. Some also admit honorary fellows or members. The members of some societies may use designatory letters; but this does

not mean that the holder is 'qualified' in the same sense as a doctor or a chartered accountant.

Membership of some learned societies is by election and is commonly accepted as distinguishing the candidate by admission to an exclusive group. Candidates may be selected in respect of pre-eminence in their subject or in the public service. The chief associations of this type are the Royal Society (founded 1660 and granted Royal Charters in 1662 and 1663), the Royal Academy (founded 1768) and the British Academy (founded 1901).

The Royal Society was established to improve 'natural Knowledge' and is mainly concerned with science; in pure and applied science and technology election to Fellowship (F.R.S.) is regarded as one of the highest distinctions in science. The Society has three Royal Fellows, Fellows and Foreign Members.

The Royal Academy was established to cultivate and improve the arts of painting, sculpture and architecture. There are two main grades of membership, Academicians (R.A.), including Senior Academicians, and Associates (A.R.A.); there are also a small number of Honorary Academicians. The late Sir Winston Churchill was Honorary Academician Extraordinary.

The British Academy was established to promote historical, philological and philosophical studies. The Academy has Fellows (F.B.A.), Corresponding Fellows and a small number of Honorary Fellows.

A list of Learned Societies and Study Associations can be found at the end of this section, starting on page 375.

OCCUPATIONAL ASSOCIATIONS

The occupational associations do not qualify practitioners but organise them. Some co-ordinate the activities of specialists (e.g. the Society of Medical Officers of Health) and others promote the individual and collective interests of professionals working in a wider area. Both also seek to safeguard the public interest and to offer an educational service to their members. The latter type of association is especially numerous among teachers, who have over 20 associations (e.g. the National Union of Teachers, the Educational Institute of Scotland, the National Association of Schoolmasters and the National Association of Head Teachers), and is represented in the medical profession by the British Medical Association. Both types of association usually have only one grade of membership.

LIST OF STUDY ASSOCIATIONS AND LEARNED SOCIETIES

<u>Date of Foundation</u>	<u>Title</u>	<u>Grades of Membership</u>
Agriculture and related subjects		
1926	Agricultural Economics Society	
1953	British Agricultural History Society	
1944	British Society of Animal Production	
1947	British Society of Soil Science	
1921	Commonwealth Forestry Association	
	National Institute of Agricultural Botany	
1838	Royal Agricultural Society of England	
1784	Royal Highland and Agricultural Society of Scotland	
1804	Royal Horticultural Society	Fellows
1904	Royal Welsh Agricultural Society	
1931	Society for Applied Bacteriology	Members
1943	Society of Dairy Technology	Ordinary Members, Student Members
1925	Society of Foresters of Great Britain	Fellows, Associates, Professional Mem- bers, and Students. Applicated Members
1946	The Soil Association	Members
1837	Yorkshire Agricultural Society	Life Members, Annual Members
Anthropology and related subjects		
1951	British Sociological Association	Members, Student Members
1907	Eugenics Society	
1843	Royal Anthropological Institute of Great Britain and Ireland	Fellows (F.R.A.I.), Associate Members
1823	Royal Asiatics Society of Great Britain and Ireland	Fellows, Members
1901	Royal Central Asian Society	
1868	Royal Commonwealth Society	Family Members, Associates and Senior Members
1946	Tavistock Institute of Human Relations	
Archaeology		
1843	British Archaeological Association	
1843	Royal Archaeological Institute	Members, Associates
Biology		
1836	The Botanical Society of the British Isles	Members and Junior
1836	The Botanical Society of Edinburgh	Members

<u>Date of Foundation</u>	<u>Title</u>	<u>Grades of Membership</u>
Biology (continued)		
1913	The British Ecological Society	Members
1896	The British Mycological Society	Members
1858	The British Ornithologists Union	Members
1957	The British Trust for Entomology	Members
	The British Trust for Ornithology	Ordinary Members, Corporate Members
1919	The Genetical Society	Members
1788	The Linnean Society of London	Fellows (F.L.S.), Honorary Associates, Associates
1884	The Marine Biological Association of the United Kingdom	Members
1876	The Physiological Society	Members
1844	The Ray Society	Members
1833	The Royal Entomological Society of London	Honorary Fellows and Fellows
1839	The Royal Microscopical Society	Fellows
1771	The Royal Physical Society of Edinburgh	Members
1889	The Royal Society for the Protection of Birds	Fellows, Members, Junior Members
1909	The Royal Zoological Society of Scot- land	Honorary Fellows, Life Fellows, Annual Fellows
	The Scottish Marine Biological Associa- tion	
1924	The Society for Experimental Biology	Members
1937	The Systematics Association	
1826	The Zoological Society of London	Ordinary Fellows, Scientific Fellows (F.Z.S.), Associates
Chemistry		
1911	The Biochemical Society	Members
1841	The Chemical Society	Members
1913	The Institute of Petroleum	Fellows, Members, Associate Fellows, Associate Members, Students
1918	Oil and Colour Chemists Association	Ordinary Associate and Juniors
1874	The Society for Analytical Chemistry	Members
1881	Society of the Chemical Industry	Members
Economics and related subjects		
1928	Economic History Society	
1949	The Economics Research Society	Members
1938	National Institute of Economic and Social Research	
1890	Royal Economic Society	Fellows (F.R.Econ.S.)
1919	Royal Institute of International Affairs	Members, Associates
1834	Royal Statistical Society	Fellows
1897	Scottish Economic Society	

<u>Date of Foundation</u>	<u>Title</u>	<u>Grades of Membership</u>
Engineering		
1924	Association of Public Lighting Engineers	Group Members, Associate Members, Associates, Students
1909	The Illuminating Engineering Society	Fellows, Diploma Members, Corporate Members, Students
1908	Institute of Metals	Ordinary Members, Junior Members, Student Members
1911	Institution of Locomotive Engineers	Members, Associate Members, Associates, Graduates, Students
1959	Institution of Nuclear Engineers	Full Members, Associate Members, Junior Members
1920	Newcomen Society for the Study of the History of Engineering and Technology	
1860 (RC. 1910 and 1960)	Royal Institution of Naval Architects	Members, Associate Members, Associates, Students, Student Associates
1927	Television Society	Fellows, Members, Associate Members, Associates, Students

Geography, Geology and related subjects

1931	Gemmological Association of Great Britain	Fellows, Probation- ary, Ordinary Members
1807	Geological Society of London	Fellows (F.G.S.), Junior Associates
1846	Hakluyt Society	Members
1933	Institute of British Geographers	Members
1876	Mineralogical Society of Great Britain and Ireland	Members
1847	Palaeontographical Society	Members
1830	Royal Geographical Society	Fellows (F.R.G.S.), Associate Members
1884	Royal Scottish Geographical Society	Members, Associates, Junior Members

History

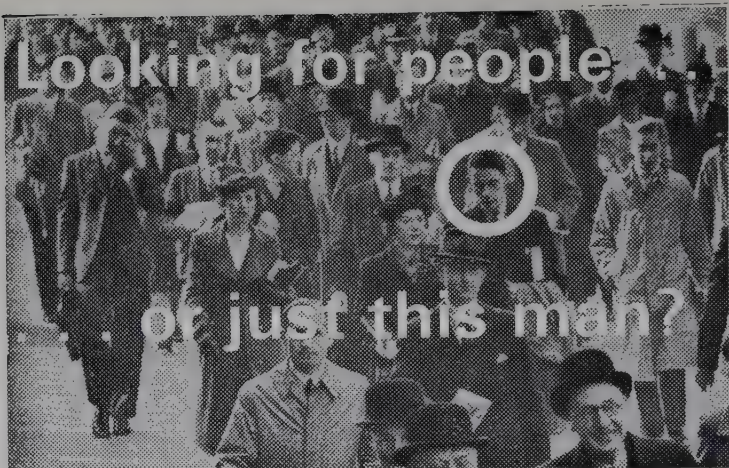
1903	British Numismatic Society	
1864	Harleian Society	
1932	British Records Association	
1906	The Historical Association	
1868	Royal Historical Society	Fellows (F.R.Hist.S.), Associates
1836	Royal Numismatic Society	Fellows
1707 (RC. 1751)	Society of Antiquaries of London	Honorary Fellows, Fellows (F.S.A.)
1780	Society of Antiquaries of Scotland	

<u>Date of Foundation</u>	<u>Title</u>	<u>Grades of Membership</u>
Law		
1958	British Institute of International and Comparative Law	
1934	Stair Society (Scots Law)	
Literature and Arts		
1892	Bibliographical Society	
1903	Classical Association	Life Members
1906	English Association	Individual and Corporate Members
1893	Modern Language Association	
1888	National Society for Art Education	Fellows (F.S.A.E.)
1842	Philological Society	Members (M.P.S.)
1874	Royal Musical Association	
1883	Royal Institute of Oil Painters	
1831	Royal Institute of Painters in Water Colour	
1904	Royal Society of British Sculptors	Fellows, Associates
1823	Royal Society of Literature of the United Kingdom	Fellows (F.R.S.L.), Members
Mathematics and Physics		
1890	The British Astronomical Association	Members, Student Members
1957	The British Computer Society	Institutional Members, Ordinary Members, Associate Members
1858	The British Horological Institute	Members
1927	The British Institute of Radiology	Home and Overseas Members
1933	The British Interplanetary Society	Fellows, Associate Fellows, Members, Corporate Members
1903	The Faraday Society	Members, Junior Members
1935	The Institution of Electronics	Fellows, Members, Associate Members, Technicians, Companion Associates, Graduates, Students
1865	The London Mathematical Society	Members, Associates
1871	The Mathematical Association	Members, Associates
1870	The Royal Astronomical Society	Fellows, Associates, Junior Members
1850	The Royal Meteorological Society	Fellows (F.R.Met.S.), Foreign Members, Student Members, Life Members
1853	The Royal Photographic Society of Great Britain	Ordinary Members, Associates, Fellows, Junior Members

<u>Date of Foundation</u>	<u>Title</u>	<u>Grades of Membership</u>
Medicine		
1887	The Anatomical Society of G.B. and Ireland	Honorary Members, Life Members, Ordinary Members
1933	The Association of British Neurologists	Honorary Foreign Members, Honorary Members, Members
1953	The Association of Clinical Biochemists	Ordinary Members, Overseas Members
1927	The Association of Clinical Pathologists	Members
1957	The Association for the Study of Medical Education	Individual and Corporate Members
1959	The British Academy of Forensic Sciences	Members, Associate Members
1920	The British Association in Dermatology	Honorary Foreign Members, Honorary Members, Senior Ordinary Members and Members
	The British Association in Forensic Medicine	Home and Foreign Members
1943	The British Association of Otolaryngologists	Members
	The British Association of Paediatric Surgeons	Home and Overseas Members
1943	The British Association of Physical Medicine	Associate Members, Overseas Members
	The British Association of Plastic Surgeons	Full Members, Associate Members
1945	The British Association of Urological Surgeons	Full Members (Home and Overseas), Associate Members (Home and Overseas)
1934	The British Diabetic Association	Full Members, Associate Members, Pensioners
	The British Geriatrics Society	Members
1950	The British Neuropathological Society	Members
1953	The British Occupational Hygiene Society	Members
1918	The British Orthopaedic Association	Fellows, Members and Associates
1928	The British Paediatric Association	Members
	The British Pharmacological Society	Members
1919	The British Psycho-Analytical Society	U.K. Members, Overseas Members, U.K. Associate Members, Overseas Associate Members
1902	The British Psychological Society	Fellow (F.B.Ps.S.)
1937	The British Society of Gastroenterology	Senior Ordinary and Associate Members

<u>Date of Foundation</u>	<u>Title</u>	<u>Grades of Membership</u>
Medicine (continued)		
1948	The British Society of Medical Hypnotists	Members
1939	The British Society for Research on Ageing	Members
1907	The British Society for the Study of Orthodontics	Ordinary Members, Corresponding Members
1898	Chest and Heart Association	Ordinary Members, Subscribing Members, Life Members
1959	The Forensic Science Society	Members
1831	Harveian Society of London	
1819	The Hunterian Society	Fellows
1891	The Lister Institute of Preventive Medicine	Members
1773	The Medical Society of London	Fellows, County Fellows
1922	The Medical Society for the Study of Venereal Diseases	Members
1946	National Association for Mental Health	Full Members, Associate Members, Members
1941	The Nutrition Society	Members
1906	Pathological Society of Great Britain and Ireland	Members
1737 (RC. 1778)	Royal Medical Society	Ordinary Members, Life Members
1866	The Royal Medico-Chirurgical Society of Glasgow	Members
1841	The Royal Medico-Psychological Association	Ordinary Members, Associate Members
1875	The Royal Sanitary Association of Scotland	Members
1805 (RC. 1834)	The Royal Society of Medicine	Fellows, Overseas and Applicants
1921	The Scottish Association for Mental Health	
1926	The Society of British Neurological Surgeons	Members, Associate Members
1946	The Society for Endocrinology	Members
1884	The Society for the Study of Addiction to Alcohol and Other Drugs	Members
1933	The Society of Thoracic Surgeons of Great Britain and Ireland	Full Members, Associate Members, Overseas Members
1920	The Tavistock Institute of Medical Psychology	
1944	The Thoracic Society	Senior Members, Ordinary Members, Associate Members, Overseas Members

<u>Date of Foundation</u>	<u>Title</u>	<u>Grades of Membership</u>
Science—General		
1831	The British Association for the Advancement of Science	Life Members, Members, Associates, Students
1925	The Royal Institute of Philosophy	Members, Associate Members
1799	The Royal Institution of Great Britain	Honorary Members, Members, Associate Students
1754	The Royal Society of Arts	Fellows (F.R.S.A.), Associates (A.R.S.A.)
1783	The Royal Society of Edinburgh	Honorary Fellows, Foreign Honorary Fellows, and Fellows (F.R.S.E.)
Town and Country Planning		
1899	Town and Country Planning Association	Individual and Corporate Members



As scientists and technologists become more sought after and their salaries rise accordingly, many personnel officers realise how expensive and complicated the task of technical staff recruitment has become. During the past few years New Scientist has built up a very considerable knowledge of specialised recruitment advertising. We are perfectly willing to share this knowledge and to offer guidance on such matters as the size of space, design, typographical layout and copy.

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Part 6

Qualifications listed by Trades and Professions

The Institute of Chartered Accountants in England and Wales

Incorporated by Royal



Charter, 11th May, 1880

Qualification as a Chartered Accountant offers a man or woman exceptional opportunities for an interesting and rewarding career, whether in practice or in industry and commerce, education or a variety of other walks of life.

Industrial and commercial organisations, both large and small, rely upon the advice, professional skill, experience and integrity of the Chartered Accountant who has an increasingly important role in the economic life of the country.

Fellows of the Institute are entitled to use the designatory letters FCA and associates the letters ACA.

For particulars of training, and of the Institute's examinations, write to the Secretary of the Institute at

City House, 56/66 Goswell Road, London E.C.1

Qualifications listed by Trades and Professions

In this section the qualifications in each trade or profession are, generally speaking, arranged in the following order:

Membership of professional institutions and associations

University Degrees and Diplomas (including C.N.A.A. degrees)

National Diplomas and Certificates

College Diplomas and Associateships

City and Guilds of London Institute Certificates

Certificates of the Regional Examining Unions

Other qualifications.

Note. Only Qualifying bodies are included; for a full list of professional associations and learned societies see Part 5, page 375.

ACCOUNTANCY

Institute of Chartered Accountants in England and Wales
56/66, Goswell Road, London, E.C.1

Fellow (F.C.A.). Candidates must have completed 10 years of membership of the Institute or 5 years in practice as a public accountant.

Associate (A.C.A.). Candidates must serve five years under articles with a member of the Institute. (This period is reduced to three years for graduates—*see below*.)

To be articled, a candidate must be at least 16 years old and hold G.C.E. 'O' level passes (or the equivalent) in six subjects, or five passes including two at 'A' level, to include in each case English Language and a mathematical subject.

The Intermediate Examination is taken during articulated service, and consists of four papers: 2 on book-keeping and accounts, one on auditing and a general paper. Exemption is granted to graduates who have taken an approved degree course.

The Final Examination is taken in two parts, the second in the last six months of articulated service. The subjects for the Final examination are advanced accounting (3 papers), English law (2 papers), taxation (2 papers), auditing and a general paper.

When a student has completed his articles and passed the Final examination he may apply for admission to the Institute and thereafter describe himself as a Chartered Accountant.

The Institute of Chartered Accountants of Scotland
27, Queens Street, Edinburgh, 2

Members (C.A.). Candidates for membership must serve an apprenticeship, normally of five years, with a practising member of the Institute. (The period is reduced to three years for graduates—*see below*, 'Degrees'.)

An intending apprentice must be at least 17 years old and hold one of the following qualifications:

- (a) the Scottish Universities Preliminary Examination or S.C.E. passes in 1 subject at Higher Grade and 6 on the Ordinary Grade, or 2 on the Higher Grade and 3 on the Ordinary Grade or 3 on the Higher Grade and 1 on the Ordinary Grade;
- (b) 7 'O' level G.C.E. passes, or 1 'A' and 5 'O' level passes or 2 'A' and 2 'O' level passes;

- (c) the Senior Certificate Examination of the Ministry of Education for Northern Ireland;
- (d) the Cambridge Oversea School Certificate with a standard equivalent to that in (b) above. (From 1968 the Certificate of Attestation of Fitness for entrance to a Scottish University will be required for registration as apprentice.)

The five-year apprenticeship includes one year spent in full-time study at a Scottish University following a course in law, accountancy and economics.

The Institute's examination is in five parts, taken annually during apprenticeship. The subjects are: Part I — arithmetic, algebra and book-keeping; Part II — accounting, income tax, auditing and precis-writing; Part III — general commercial law, company law and income tax law applicable to trustee and arbitrary and political economy; Part IV — preparation and presentation of accounts, taxation and estate duty; and Part V — accounting principles and problems, auditing investigations and valuations, cost and management accounting.

Students who complete their apprenticeship and pass these examinations may apply for membership of the Institute and, when admitted, may describe themselves as Chartered Accountants.

The Institute of Chartered Accountants in Northern Ireland 6, Callendar Street, Belfast, 1

Associate (A.C.A.). Membership is obtained by a five-year period of articulated service with a member of the Institute and by passing the Institute's examinations. (This period is reduced to three years for graduates — *see below*, 'Degrees'.) Candidates for articles must be at least 16 years old and have passed the Institute's Preliminary Examination or have gained exemption by an approved certificate of education.

The Institute's examination is in five parts, taken annually during apprenticeship. Graduates are exempt from Part I of the examination, which covers book-keeping, arithmetic and algebra. The subjects in Part II are accounting, auditing, taxation and precis-writing; Part III consists entirely of legal subjects; and Parts IV and V cover more advanced accounting, auditing and taxation, cost accounting, managerial accounting, investigation and valuations.

Candidates who have completed their articulated service, passed the examinations and reached the age of 21 are eligible for election

THE ASSOCIATION OF CERTIFIED AND CORPORATE ACCOUNTANTS



THE Association has over 11,000 members and over 17,000 students and is the second largest of the professional bodies of accountants recognised by Act of Parliament.

The designation of members is "Certified Accountant". Fellows are denoted by the letters F.A.C.C.A. and Associates by the letters A.A.C.C.A.

Students are not compelled to serve under articles of clerkship, but may as an alternative obtain their practical experience by employment in the finance or accounting department of a commercial or industrial company or in one of the nationalised industries, or by employment (not under articles) in the office of a practising accountant.

Further information may be obtained from the Secretary of the Association.

**22 Bedford Square
London, W.C.1**

Museum 5163

to the Institute and, when admitted, may describe themselves as Chartered Accountants.

The Association of Certified and Corporate Accountants
22, Bedford Square, London, W.C.1

Fellow (F.A.C.C.A.). To qualify for admission as a Fellow of the Association a person must have been an Associate of the Association or of another approved body of accountants for at least 5 years and have been in practice as an accountant or served as a Senior Accountant for at least 5 years.

Associate (A.A.C.C.A.). Candidates must serve a period of five years either in articulated service with a member of the Institute in private practice *or* approved employment in the finance or accounting department of a commercial or industrial company, in nationalised industry or in local government.

This period is reduced to four years for students who have remained at school until 18 years and have 'A' level G.C.E. passes in two or more subjects, and to three years for graduates.

To be registered as a student a candidate must either pass the **Associate's Preliminary Examination** or obtain exemption by offering *either* 5 G.C.E. 'O' level passes in academic subjects or three passes at 'O' and one at 'A' level or one at 'O' and two at 'A' level *or* 5 S.C.E. Ordinary Grade passes or 2 Ordinary and 2 Higher Grade passes.

In all cases English and Mathematics must be included *or* 5 passes at the Ordinary level (including a mathematical subject) in the senior Certificate of the Ministry of Education for Northern Ireland.

The Intermediate and Final Examinations are both in two parts. The subjects covered include accounting, auditing, law, taxation, management accounting and business administration.

All candidates take the Final Examination but exemptions can be granted from the Intermediate; graduates who have taken an approved degree course are granted total exemption, and graduates in economics and law gain exemption in those subjects. Students who have taken an approved course and, after two years, gained the O.N.C. in Business Studies are granted exemption on a subject-for-subject basis.

Candidates who have completed their period of practical experience and passed the Final Examination are eligible for election as Associates of the Institute and, when admitted, may describe themselves as Certified Accountants.

COURSES OF INSTRUCTION

Colleges offering courses leading to the Associateship of the Association of Certified and Corporate Accountants.

<u>College</u>	<u>Duration</u>	<u>Examination</u>
Brighton Technical College	2 years full-time	Intermediate
Slough College	2 years full-time	Intermediate
Durham Technical College	2 years full-time	Intermediate
South-West Essex Technical College	1 year full-time	Intermediate
Bromley Technical College	1 year full-time	Intermediate
Leeds College of Commerce	4 years full-time	Final
Balham and Tooting College of Commerce	4 years full-time	Final
City of London College	3 years sandwich	Final Sections I and II
North-West Polytechnic	2 years full-time	Intermediate
Manchester College of Commerce	4 years full-time	Final
Constantine College of Technology	2 years full-time	Intermediate
Harrow Technical College	2 years full-time	Intermediate
Regent Street Polytechnic	2 years full-time	Intermediate
Newcastle Municipal College of Commerce	2 years full-time	Final
	3 years sandwich	Final
Plymouth College of Technology	2 years full-time	Intermediate
Taunton Technical College		Intermediate
Weston-super-Mare Technical College		
Monkwearmouth College of Further Education, Sunderland	2 years full-time	Intermediate
Staffordshire College of Commerce, Wednesbury	3 years sandwich	Final
Kingston College of Technology	3 years full-time	Final
Worthing College of Further Education	2 years full-time	Final
The College, Swindon	2 years full-time	Intermediate
Bromsgrove College of Further Education	2 years sandwich	Intermediate
Welsh College of Advanced Technology	2 years full-time	Final only
Central College of Commerce and Distribution, Glasgow	4 years full-time	Final

The Institute of Municipal Treasurers and Accountants

1, Buckingham Place, London, S.W.1

Fellow (F.I.M.T.A.). Associates of at least five years' standing may be elected Fellows if they hold a full-time appointment as the chief financial officer of a local or public authority (or a comparable appointment) and are directly responsible to the authority for their work.

Associate (A.I.M.T.A.). Membership of the Institute is open to those who are employed in the finance department of a local or public authority, and who pass the Institute's examinations. A period of qualifying employment in such a department is required for entry to the examinations, which are in two parts, Intermediate and Final.

Candidates for the **Intermediate Examination** must hold G.C.E. 'O' level passes in five subjects including English language, English or English literature and mathematics or an equivalent qualification. From 1966 candidates must offer two of these passes at 'A' level. They must also have spent two years in qualifying employment. The examination subjects are accounting, auditing, commercial law, elements of public administration and income tax, costing and financial administration.

Graduates in Commerce and Economics may be exempted from the examinations and all graduates may have the period of service reduced.

The Final Examination is in two parts; candidates for the second part must be at least 22 years old and have had four years' qualifying experience. The subjects for examination are: Part A, advanced accounting, administration law and finance; Part B, auditing, banking, public finance, economics and statistics.

Candidates who have passed the Final Examination are eligible for election to the Institute provided that they still hold qualifying appointments and, when elected, may describe themselves as Chartered Municipal Treasurers.

The Institute of Cost and Works Accountants

63, Portland Place, London, W.1

Until June 1964, the Institute conducted examinations for Associateship and also for Fellowship (F.C.W.A.) thus:

- (a) Candidates were required to have 5 'O' level G.C.E. passes including mathematics and English language, English or English literature or an equivalent qualification to be accepted as students.

The Intermediate examination was in two parts and was taken within five years of registration. The subjects were industrial evolution and management, economic aspects of industry and commerce, commercial practice, office management and business methods, book-keeping and accounts, production methods and services and cost accountancy (four papers).

The Final Examination was also in two parts and was taken within eight years of registration. The subjects were management (factory and distribution), advanced accountancy, the legal aspects of industry and commerce, statistical method and advanced cost accountancy (three papers).

Candidates for election to the Associateship were required to pass these examinations and to have had at least three years' practical costing experience.

- (b) The Institute also held examinations and awarded a Fellowship in management accountancy, which was open to certain members of other accountancy bodies as well as to Associates of the Institute. To be eligible for Fellowship candidates were required to pass the examination, be at least 26 years of age, and have had not less than five years' experience either in management accountancy or as a practising accountant.

In June 1964 a new examination in five parts replaced the regulations described above (a and b).

Fellow (F.C.W.A.). Applicants for this grade of membership are required to pass the examination, to be at least 26 years old and to have had not less than five years' practical experience of cost and management accountancy at a high level.

Associate. Candidates are required to pass the examination, to be at least 21 years old and to have had three years' practical experience of cost and management accountancy.

THE NEW EXAMINATION

Requirements for entry to the examination are one 'O' level and two 'A' level passes, or three 'O' level and one 'A' level passes, or five 'O' level passes, in all cases including Mathematics and English Language. Candidates may take the parts of the examination singly or two parts together. The following subjects are covered:

Part I: Industrial Administration, Book-keeping, Economics, Statistics; Part II: Cost Accountancy (a) Labour, (b) Materials, (c) Overhead; Part III: Office Management, Financial Accountancy, Industrial and Commercial Law; Part IV: Advanced Cost and Management Accountancy; Part V: Advanced Accountancy and Financial Management, Management Principles and Practice, Company Law, Taxation.

The British Association of Accountants and Auditors Ltd. (by guarantee)

Stamford House, 2-4, Chiswick High Road, London, W.4

Fellow (F.B.A.A.). To be eligible for admission as a Fellow a person must have been an Associate of the Association or of another approved professional accountancy body for at least five

years, and also must have been practising as a Public Accountant for at least five years or holding a senior position in accountancy for at least ten years.

Associate (A.B.A.A.). An Associate must have at least five years' accountancy experience, and must have passed the Intermediate and Final Examinations of the Association. For entry to the examinations a student member must have served a specified period of articles: two years before sitting the Intermediate and two further years before the Final. The syllabus for these examinations covers various aspects of accounting and law, auditing, economics and finance.

An Associate (or Fellow) of the Association may describe himself as a Registered Accountant.

A student member must be at least 16 years old and of good general education, and in articulated service with a member of the Association.

The Faculty of Auditors Ltd.

(by guarantee)

36, Ebury Street, London, S.W.1

Fellow (F.A.). A Fellow of the Faculty must have been for at least five years an Associate of the Faculty or a member of another body of Accountants—Institute of Chartered Accountants in England and Wales, Society of Incorporated Accountants, Association of Certified and Corporate Accountants, Institute of Chartered Accountants of Scotland, Institute of Chartered Accountants in Ireland. He must also have had considerable experience as an Accountant and Auditor and be over 28 years old.

Associate (A.F.A.). An Associate must be at least 21 years old and, having served five years as an articulated clerk with a member of the Faculty (three years for a university graduate), must have passed the examinations of the Faculty. These consist of a Preliminary, Intermediate and Final—which may be taken in two parts; and cover various accountancy and legal subjects. The Intermediate may be taken after two years' articulated service. An Associate (or Fellow) may call himself a Public Accountant and Auditor.

A Graduate is one who, having passed the examinations, is not yet able to satisfy the conditions for membership—because of his age or lack of experience.

A Registered Student is an articulated clerk preparing for the Faculty's examinations.

The Association of International Accountants Ltd.
(by guarantee)

5-7, New Street, London, E.C.2

Fellow (F.A.I.A.). The Council may elect as a Fellow anyone who has passed the Final Examination (*see below*) and has been in practice as a Public Accountant for at least five years or as a Senior Accountant for at least ten years.

A Fellow may describe himself as 'International Accountant (Inc.)'.

Associate (A.A.I.A.). An Associate is one who has passed the Final Examination of the Association, has had at least five years' accountancy experience and is elected by the Council.

The Final Examination is taken in two parts and covers advanced book-keeping and accountancy, auditing, mercantile and company law, costing, income tax and general financial knowledge. Candidates must be at least 20 years old and Licentiates of the Association. The whole examination must be completed within three years.

An Associate may describe himself as 'International Accountant (Inc.)'.

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A Licentiate must be at least 19 years old and have passed the Association's Intermediate Examination. This is taken in two sections and covers accounting, mercantile law, company law and an optional subject. A Licentiate may also be one who has passed the Final Examination but not yet satisfied the condition of a qualifying period of service. Exemption from the Examination may be granted to experienced candidates and to those holding a qualification of comparable standard.

Registered Students must be at least 16 years old and should be working in an accountancy department and/or in articulated service with a member of the Association and/or be studying for the Association's examinations. They must have passed or gained exemption from the Association's Preliminary Examination, which covers English, mathematics, geography and either history or a foreign language. Exemption is granted to candidates who have passed G.C.E. or other approved examinations in acceptable subjects. A Registered Student must present himself for the Intermediate Examination within three years.

Institute of Company Accountants Ltd.

(by guarantee)

Company Accountants House, 11, Portland Road,
Edgbaston, Birmingham, 16

This is a Professional Society for Company Accountants and all Accountants engaged otherwise than in Public Practice as Accountants and Auditors.

Fellow (F.I.A.C.). A Fellow is either (a) one who is employed as Accountant of a company (this method of entry is gradually being closed) or (b) one who has been an Associate of the Institute for at least five years and has passed the Institute's examinations.

A Fellow may describe himself as 'Company Accountant (Inc.)'.

Associate (A.I.A.C.). Associates are either (a) those employed as Accountants or Assistant Accountants in a company (this method of entry is gradually being closed); or (b) those who have passed the Institute's qualifying examinations.

For entry to these examinations a candidate must be a Registered Student. There is an Intermediate and a Final Examination.

The Intermediate Examination covers book-keeping and accounts, a special branch of accounting (i.e. municipal, hospitals, etc.), economics, mercantile and company law. Exemption from the examination may be granted to those who hold the National Certificate or Diploma in Commerce with passes in appropriate subjects.

The Final Examination may be taken in two parts. It covers special branches of accountancy and law, auditing, costing, income tax, economics and business statistics.

An Associate may describe himself as 'Company Accountant (Inc.)'.

A Registered Student must have passed or gain exemption from the Preliminary Examination of the Institute. G.C.E. with 'O' level passes in English and Mathematics or an approved examination of comparable standard will qualify a candidate for exemption. **The Preliminary Examination** includes papers on English, Mathematics, History or Geography and an optional subject.

Society of Commercial Accountants Ltd.

(by guarantee)

31, Stoke Grove, Westbury-on-Trym, Bristol

(i) STUDENTSHIP

A Registered Student is one who is studying for the qualifying examinations of the Society. He must have either passed the Society's Preliminary Examination or obtained exemption from it.

The Preliminary Examination covers English, Mathematics and general subjects. Exemption is granted to candidates who have G.C.E. 'O' level passes in at least four subjects or 'A' level passes in one or more subjects. Candidates who do not hold these qualifications but are at least 21 years old and produce evidence of continued education may be granted exemption.

Registered Students who have passed an equivalent examination or who are at least 25 years old and have had five years' experience in an accountancy department may apply for exemption from the Society's **Intermediate Examination**, which covers book-keeping and accounts, taxation, elementary principles of financial control, law, economics, costing and general commercial knowledge.

Senior Registered Students are either:

- (i) Experienced accountants who have held senior financial or cost accounting appointments for several years may apply for **Senior Registered Studentship (Experienced)**. This enables them to bypass the Society's **Final Examination**, which is taken in two parts covering accounting, financial control of business undertakings, taxation, mechanised accounting, company law, cost accounts and budgetary control, mercantile law, administration of companies and economics of industry

and commerce. Instead they take the **Direct Final Examination**—a one-day examination covering accounting, financial control of business undertakings, administration of companies and either cost accounting and budgetary control or mechanised accounting.

- (ii) Commerce graduates and those who have already qualified by examination in accountancy may apply for **Senior Registered Studentship (Qualified)**. They may be required to pass in all or some of the subjects of the Direct Final examination at the Council's discretion.

(ii) MEMBERS

Fellow (F.Comm.A.). Fellows are elected Senior Associates. They may describe themselves as 'Incorporated Commercial Accountants'.

Associate (A.Comm.A.). Associates are those who have been elected to membership of the Society having passed either the Final or the Direct Final Examinations of the Society. They may describe themselves as 'Incorporated Commercial Accountants'.

Note on Training. Study for membership examinations of the professional bodies in Accountancy is usually undertaken by part-time study at evening classes or by a correspondence course. However, there are a number of colleges which offer full-time and sandwich courses leading to the Associateship of the Association of Certified and Corporate Accountants. Candidates must register as students of the Association before joining the courses.

UNIVERSITY DEGREES

(i) FIRST DEGREES

Under a scheme arranged by a Joint Standing Committee representing two of the accountancy bodies (the Institute of Chartered Accountants in England and Wales and the Association of Certified and Corporate Accountants) and certain Universities in England and Wales, a prescribed degree can be obtained which carries both a reduction in the period of practical experience required—to three years—and also exemption from the Intermediate Examination of the professional bodies concerned. (All university graduates may have the period of experience shortened to three years, but only those taking the following degrees gain complete exemption from the Intermediate examination of their professional body.)

Degree Courses approved by the Joint Standing Committee of the Universities and the Accountancy profession are

offered at the following universities. Entry requirements are given in each case in terms of G.C.E. passes.

Birmingham. B.Com. Hons.: Business Management Options with quantitative studies. 3 years. 3 'A' level G.C.E. passes obtained at one sitting—Mathematics to be passed at 'O' level.

Bristol. B.A. Special Hons.: Economics and Accounting course. 3 years. 2 'A' level G.C.E. passes, preferably including Mathematics. Mathematics must be passed at 'O' level.

Hull. B.Sc.(Econ.): Special subject accounting. 3 years. 3 'A' level G.C.E. passes preferably including Mathematics and English literature.

Kent. B.A. Hons.: B.A. in Social Sciences—accounting course. Course submitted for approval to the Joint Standing Committee. 3 years. 2 'A' level G.C.E. passes.

Leeds. B.Com.: Principal subjects Accountancy or Law. 3 years. 3 'A' level G.C.E. passes preferred.

Liverpool. B.Com.: 3 years. 3 'A' level G.C.E. passes preferred.

London (London School of Economics). B.Sc.(Econ.) Hons.: Accounting course (subject selected at the end of the first year). 3 years. 2 'A' level G.C.E. passes. A pass in Mathematics at 'O' level is desirable.

Manchester. B.A.(Econ.) Hons.: Special course in Accounting. 3 years. 3 'A' level G.C.E. passes preferred.

Newcastle. B.A.: B.A. in Economic Studies or B.A. Hons. in Economics and Accounting. 3 years. Normally 3 'A' level G.C.E. passes.

Nottingham. B.A.(Hons.): Industrial Economics course. 2 'A' level G.C.E. passes including Mathematics if Part I course for Economics includes Mathematics; Mathematics at 'O' level must be passed.

Sheffield. B.A.(Econ.) Hons.: Accountancy and Financial Administration option (selected at end of first year). 2 or 3 'A' level G.C.E. passes.

Southampton. B.Sc.(Soc.Sci.) Hons.: Accountancy as Principal subject. 3 years. 2 'A' level G.C.E. passes.

Wales (Aberystwyth). B.Sc. Econ. Hons.: Economics and Business (including Accountancy) option. 3 years. 2 'A' level G.C.E. passes; a pass in Mathematics at 'O' level is desirable.

Wales (Cardiff). B.Sc. Econ. Hons.: Both Economics and Law and Accountancy special subjects. 3 years. 2 'A' level G.C.E. passes; a pass in Mathematics at 'O' level is desirable.

Bradford. Degree in Administrative and Business Studies and Social Sciences: 3 or 4 years. Accountancy is available as

a special subject after the first year. 2 'A' level G.C.E. passes, including Mathematics at 'O' or 'A' level.

Strathclyde. B.A. Hons. in Accountancy and/or Commerce: 4 years. 2 'A' level G.C.E. passes.

POST-QUALIFICATION AWARDS IN SPECIAL SUBJECTS

Joint Diploma in Management Accounting Services (J.Dip.M.A.). This qualification is to be awarded by a Board consisting of representatives of:

The Institute of Chartered Accountants in England and Wales.

The Institute of Chartered Accountants of Scotland.

The Institute of Chartered Accountants in Ireland.

The Institute of Cost and Works Accountants.

The Association of Certified and Corporate Accountants.

The examination for the Diploma will be in two parts. To qualify for admission to the examinations a candidate must be a member of one of the above participating bodies. In addition for entry to Part I he must be at least 26 years old and, after qualifying as a member of his professional body, must have had two years' acceptable experience in management accounting services in industry or in management consultancy. To be eligible for entry to Part II a candidate must have passed Part I and have had five years' experience either in charge of installation of work on behalf of consultants or as financial executive of a business.

In Part I the subjects for examination are management accounting, management principles and business administration, office machines and methods and data processing, analytical techniques and general financial knowledge and investigations. Part II consists of a thesis on any part of the Part I syllabus and a viva voce examination on it.

The Certificate in Management Information. This will be awarded jointly by the Institute of Chartered Accountants in England and Wales and the Institute of Chartered Accountants in Ireland.

The examination will normally be taken within a few years of qualification as a member of one of the above Institutes. It will require a period of at least two years' part-time study, but there will be no specific requirement as to practical experience.

The examination will consist of four three-hour papers in (1) Business organisation and administration, (2) Design of systems and data processing, (3) The use of analytical and statistical techniques in providing management information, and (4) Financial management and the use of accounting information.

ADVERTISING AND MARKETING

Institute of Practitioners in Advertising

44, Belgrave Square, London, S.W.1

Advertising Agencies are admitted as incorporated practitioners in advertising.

Fellow (F.I.P.A.). Fellows are selected from the classes of Associate Members or Members after outstanding service to advertising.

Candidates who have passed the Final Examinations (*see below*) but who are not otherwise accepted for membership may be allowed to use the style Dip.P.A. and to have certain other privileges.

Member (M.I.P.A.). Members are recognised to have the ability, knowledge and experience to plan, organise and conduct a national advertising campaign and to be able to represent their advertising agency correctly to its clients. The Membership examinations are designed to test these qualifications (*see below*).

Associate Member (A.M.I.P.A.). Associate Members are specialists in an advertising agency who have reached a level in advertising considered worthy of recognition by the Institute in Copy, Design, Financial Advertising, Market Research, Mechanical Production and Printing, Media, Press Advertising, Public Relations in Agency Practice or T.V., Cinema and Radio.

Student. Candidates for the Institute's examinations must be registered as Students; they must be employed by a service advertising agency or a subsidiary or associated company.

(i) EXAMINATIONS FOR MEMBERSHIP

There are two examinations.

Advertising Joint Intermediate Examination (in 1967 this examination will be replaced by the **H.N.C. in Business Studies**). Candidates for the Examination may be of any age but must have an acceptable standard of education (e.g. 'O' level G.C.E. passes in four subjects, including three non-technical subjects); *or* they must be over 24 and have at least five years' experience.

Holders of the certificate may go on either to the Final Examination of the Advertising Association or to the examinations for Membership and Associate Membership of the Institute.

The Advertising Association and the Institute of Practitioners in

Advertising use a Joint Intermediate Examination. Candidates must have passed an approved examination such as the G.C.E. in four subjects at 'O' level (including English), or may be accepted, in exceptional cases, in the light of their age and experience. The subjects of the examination, which may be taken in any order within a period of five years, are:

Introduction to Advertising and its Administration; English; Reproduction; Advertisement Design and Presentation; Media; Copywriting; Economics in relation to Advertising; Law in relation to Advertising; Psychology in relation to Advertising.

One-year full-time courses are offered at the College for the Distributive Trades, London, and Watford Technical College.

Membership Final Examination. Candidates must be not less than 21, have had at least three years' experience with a recognised advertising agency and have passed, or been exempted from, the Advertising Joint Intermediate Examination, or have passed the Final Examination of the Advertising Association or be an Associate Member of the Institute.

(ii) EXAMINATIONS FOR ASSOCIATE MEMBERSHIP

There are two examinations.

Associate Membership Intermediate Examination. Candidates must have a satisfactory standard of education in English, comparable to an 'O' level G.C.E. pass.

A one-year full-time course is offered at the following institutions:

Watford Technical College; Wandsworth Technical College; Ealing Technical College and School of Art; The City of London College; The College for the Distributive Trades; South-East Essex Technical College and School of Art; South-West Essex Technical College and School of Art; West London College of Commerce; Aberdeen Commercial College; City of Birmingham College of Commerce; The College of Commerce, Bristol; Central College of Commerce and Distribution, Glasgow; Leeds College of Commerce; City of Liverpool College of Commerce; Manchester College of Commerce; Municipal College of Commerce, Newcastle upon Tyne; Nottingham and District Technical College; Sheffield College of Commerce and Technology.

Associate Membership Final Examination. Candidates must not be less than 21, have had at least three years' experience in an advertising agency in membership of the Institute or a controlled company thereof or a recognised advertising agency, and have passed, or been exempted from, the Advertising Joint Intermediate Examination, or the Associate Membership Intermediate Examination or the Final Examination of the Advertising Association.

The Advertising Association

1, Bell Yard, London, W.C.2

Members (M.A.A.) must be employed in advertising and must hold the Final Certificate of the Advertising Association.

THE EXAMINATIONS

Candidates for membership of the Association are required first to pass the Advertising Joint Intermediate Examination (or in the future the O.N.C. and H.N.C. in Business Studies, including the optional paper on Advertising) (*see above* 'Institute of Practitioners in Advertising'). Candidates who are successful in one of these examinations may go on to take the Association's Final Examination leading to the **Final Certificate of the Association**. The syllabus for this examination covers Marketing, Market Research, Campaign Planning and the Principles and Practice of Advertising. All three papers must be passed on the same occasion. Candidates who obtain exceptionally high marks may have their Certificate endorsed 'with Distinction'. Holders of this Certificate are eligible for admission to Membership of the Association.

Institute of Public Relations

Templar House, High Holborn, London, W.C.1

Honorary Life Member. The Council may confer this honour on a person in recognition of outstanding service. He need not necessarily be a member of the Institute.

Fellow (F.I.P.R.). Fellows are members elected by the Council in secret ballot in recognition of distinguished public relations work.

Member (M.I.P.R.). Members are Associates or Overseas Associates who have passed the Institute's Final Examination (*see below*) and have had at least three years' experience in the work; or they may be Associates who have had at least five years' experience and satisfy the Council that they have a thorough understanding of the principles of public relations and are qualified to practice them.

Associates are normally resident in the U.K. They should have had at least two years' experience of public relations and have passed the Institute's Intermediate Examination (*see below*). Until July 1965 public relations workers with at least three years' experience were admitted to Associate membership without examination. An Associate may describe himself as 'Associate of the Institute of Public Relations' but is not entitled to any designatory letters.

Affiliates may be public relations workers who are not eligible

for Associate status; or they may simply be associated with or interested in public relations work.

Students. Minimum education requirements for registration of a student are four G.C.E. (or equivalent) passes including two at 'A' level. One pass should be in English language or literature.

Overseas Associates are people living outside the U.K. who have passed the Institute's Intermediate Examination (*see below*) and have had at least two years' experience; or who have had three years' experience. They may style themselves 'Overseas Associate of the Institute of Public Relations' but are not entitled to designatory letters.

EXAMINATIONS

The Intermediate Examination is taken after a part-time course, usually at evening classes or study by correspondence course. The examination covers principles and practice of public relations, press relations, printed material, house journals, advertising, exhibitions, films, photography and visual aids.

The Final Examination covers the general principles and practice of public relations, and in particular in relation to central government, local government, industry and commerce, voluntary organisations and international organisations. Other subjects of use to a P.R.O. are also covered. An interview with the Board of Examiners is required and candidates are assessed on their approach to the work and ability to express themselves verbally.

Institute of Marketing and Sales Management

Marketing House, Richbell Place, Lamb's Conduit Street,
London, W.C.1

Fellow (F.Inst.M.S.M.). Fellowship is awarded by the Council to members for outstanding contribution to the Institute's work.

Member (M.Inst.M.S.M.). Members of the Institute are elected *senior* marketing, sales or advertising executives who either have considerable experience or have passed the Institute's examinations for the Diploma in Marketing (*see below*).

Associate (A.Inst.M.S.M.). Associates are less experienced sales managers, etc., applicants holding advisory positions in marketing, lecturing on sales topics and holders of the Diploma in Marketing (*see below*) who also have some executive responsibility.

Graduate (G.Inst.M.S.M.). This grade of membership is open to those who pass in the Institute's examinations for the Diploma in Marketing (*see below*).

Registered Student. People studying for the Institute's examinations may become Registered Students.

EXAMINATION

Diploma in Marketing (Dip.Inst.M.S.M.) is taken after a three-year course of part-time study. Candidates for entry to the examinations must either be members of a field sales force or be engaged in sales administration, advertising or market research, and should be sponsored by their company or by a member of the Institute. They should have four G.C.E. 'O' level or equivalent passes. Exemption from Parts I and II of the Diploma examination may be granted to holders of H.N.C. or H.N.D. in Business Studies. Graduates of British universities in Arts, Science, Commerce, Social Science or Administration may now apply for exemption from relevant subjects in the Diploma, as may holders of the Final Certificate of appropriate professional bodies and of the Senior Commercial Certificate of the Scottish Council for Commercial Education.

Exemptions are also granted to holders of the Sales Manager's Association's Final Diploma I.S.M.A. (discontinued 1964 and superseded by the Diploma in Marketing).

The examination for the Diploma covers the following subjects:

Part I

Marketing, Economics, Economic Geography, Business History of the United Kingdom.

Part II

Marketing, Commercial Law, Applied Statistics, Accounting.

Part III

Marketing, Advertising, Market Research.

Note. For qualifications in the fields of commercial art and display *see* Art and Design, page 440.

AGRICULTURE AND HORTICULTURE

MEMBERSHIP OF PROFESSIONAL BODIES

Though there are numerous professional associations in this field none of them is a qualifying body as such. The Fellowship of the Royal Horticultural Society (F.R.H.S.), for example, is open to all those interested in the subject. The Society does, however, award

two certificates, *see* page 416. For a full list of the bodies concerned *see* Part 5, page 375.

UNIVERSITY DEGREES AND DIPLOMAS

(i) FIRST DEGREES

First degrees are awarded by the following Universities. In each case the length of the course and the entry requirements are given.

University of Aberdeen. B.Sc. Hons. Agriculture, Agricultural Economics, Animal Husbandry, Soil Science: 4 or 5 years. 4 S.C.E. Higher Grade passes including an approved Science or Mathematical subject, a foreign language and English; or 6 G.C.E. passes including English language, Mathematics or a science subject and a foreign language. At least 2 passes must be at 'A' level.

Queen's University, Belfast. B.Agr. Hons. Agricultural Botany, Agricultural Chemistry, Agricultural Zoology, Mycology, Plant Pathology: 5 or 6 years. This course includes the primary degree of B.Sc. in Botany, Chemistry or Zoology. 2 'A' level G.C.E. passes in Physics and Chemistry. Mathematics and French, German or Russian must be passed at 'O' level.

Bristol College of Science and Technology. B.Sc. Hons. Horticulture: 4 years. 2 'A' level G.C.E. passes, preferably including Chemistry and 'O' level passes in English and Mathematics.

University of Cambridge. B.A. Hons. Agriculture: 3 years. 'A' level passes in 2 subjects G.C.E. passes (at 'O' and 'A' level) must include: 2 approved languages other than English, an approved Scientific or Mathematical subject, one other approved subject, and a pass in Use of English.

University of Edinburgh. B.Sc. Hons. Agriculture: 4 years.

Course requirement: *Either* a pass in Mathematics in the Higher Grade with Science (Chemistry and Physics) in the Higher Grade; *or* Mathematics in the Higher Grade with Science (Chemistry and Biology) in the Higher Grade and Physics in the Ordinary Grade; *or* Mathematics in the Ordinary Grade with Science (Chemistry and Physics) in the Higher Grade. Biology in the Higher Grade should normally be offered.

University of Glasgow. B.Sc. Hons. Agriculture, Agricultural Botany, Agricultural Chemistry, Agricultural Economics, Agricultural Zoology: 4 years.

Course requirements: A pass in the Higher Grade in Mathematics is normally required, and a Higher Grade pass in a science subject is desirable.

University of Leeds. B.Sc. Hons. Agriculture: 4 years. 2 'A' level G.C.E. passes in (preferably) 2 of the following subjects: Pure and Applied Mathematics (or Mathematics for Science), Physics, Chemistry, Botany, Zoology, Biology (not with Botany or Zoology). Candidates must spend a year working on an approved farm before or during the course.

University of Leeds. B.Sc. Ord. Agriculture: 3 years. As for Leeds B.Sc. Hons. Agriculture described above.

University of Leeds. B.Sc. Hons. Agricultural Botany: 4 years. 2 'A' level G.C.E. passes in Chemistry and Botany (in some cases Biology may be accepted).

University of Leeds. B.Sc. Hons. Agricultural Chemistry: 4 years. 2 'A' level G.C.E. passes in Chemistry and Physics (although candidates with 'A' level Chemistry and Mathematics or Biology may be considered if they have passed Physics at 'O' level).

University of London, Wye College. B.Sc. Hons. Agriculture and Agricultural Sciences: 3 years. 2 'A' level G.C.E. passes including Chemistry and one subject from Pure and Applied Mathematics, Pure Mathematics, Applied Mathematics, Physics, Botany, Zoology, Biology, Geology, Geography. Mathematics must be passed at 'O' level if not offered at 'A' level. Suitable practical experience is required before entry.

University of London, Wye College. B.Sc. Pass Agriculture and Horticulture: 3 years. 2 'A' level G.C.E. passes including preferably Chemistry and one from Botany, Zoology, Biology. Suitable practical experience is required before entry.

University of Newcastle. B.Sc. Hons. General Agriculture Option: 3 years. 3 'A' level G.C.E. passes including Chemistry and (preferably) 2 subjects from: Physics, Botany, Zoology, Biology (may not be accepted with Botany or Zoology). Previous practical experience in agriculture is required.

University of Newcastle. B.Sc. Hons. General Agriculture Option: 4 years. 2 'A' level G.C.E. passes, preferably in compatible science subjects. Previous practical experience in agriculture is required.

University of Newcastle. B.Sc. Pass General Agriculture Option: 4 years. 2 'A' level G.C.E. passes, preferably in compatible science subjects. Previous practical experience in agriculture is required.

University of Newcastle. B.Sc. Hons. Agricultural Zoology and Plant Science Option: 3 years. 2 'A' level G.C.E. passes including Chemistry and (preferably) 2 subjects from Physics, Botany, Zoology and Biology (not with Botany or Zoology).

University of Newcastle. B.Sc. Hons. Soil Science and Agricultural Biochemistry Options: 3 years. 3 'A' level G.C.E. passes in Chemistry, Physics and Botany, Zoology or Biology.

University of Newcastle. B.Sc. Hons. Agricultural Zoology and Plant Science Options or Soil Science and Agricultural Biochemistry Options: 4 years. 2 'A' level G.C.E. passes preferably in compatible science subjects.

University of Nottingham. B.Sc. Hons. Agriculture and Horticulture: 3 years. 3 'A' level G.C.E. passes in science subjects including Chemistry and (preferably) 2 of the following: Pure and Applied Mathematics, Physics, Botany, Zoology, Biology (not with Botany or Zoology), Geology, Geography.

University of Nottingham. B.Sc. Hons. Agriculture and Horticulture: 4 years. 2 'A' level G.C.E. passes, Mathematics and Chemistry must be offered at 'O' level if not passed at 'A' level.

University of Nottingham. B.Sc. Hons. Agricultural Sciences: 3 years. 3 'A' level G.C.E. passes in Chemistry, Botany and Zoology. 'A' level passes in Chemistry, Biology and Physics, or in Chemistry, a Biological subject and one from Physics, Mathematics, Geography and Geology may also be accepted.

University of Nottingham. B.Sc. Hons. Agricultural Sciences: 4 years. 2 'A' level G.C.E. passes, Mathematics and Chemistry must be passed at 'O' level if not offered at 'A' level.

University of Oxford. B.A. Hons. Agriculture: 3 years—the first year of the course consists of studies leading to the Preliminary Examination in Natural Science. 'O' or 'A' level G.C.E. passes must be offered in: (i) Two approved foreign languages. (ii) An approved mathematical or scientific subject and one other subject. 2 'A' level passes are normally required.

University of Reading. B.Sc. Hons. Agriculture, Horticultural Science and Dairying: 3 or 4 years. 2 'A' level G.C.E. passes preferably in Pure and Applied Mathematics or another approved mathematical subject. Physics, Chemistry, Botany, Zoology, Biology. (For total exemption from Intermediate Examinations 'A' level passes in Chemistry and 2 from Physics, Botany, Zoology, Biology and Mathematics are required.)

University of Reading. B.Sc. Pass Agriculture, Horticulture and Dairying: 3 years. 2 'A' level G.C.E. passes preferably in Physics, Chemistry, Botany, Zoology or Biology.

University of Reading. B.Sc. Hons. Agricultural Botany, Horticultural Botany, Agricultural Economics, Animal Nutrition and Soil Science: 3 or 4 years. 2 'A' level G.C.E. passes preferably in Pure and Applied Mathematics or another mathematical subject. Physics, Chemistry, Botany, Zoology or

Biology. (For total exemption from the Intermediate Examinations 'A' level passes in Chemistry and 2 subjects from Physics, Botany, Zoology, Biology and Mathematics are required. For Agricultural Botany and Horticultural Botany courses an 'A' level pass in Botany is preferred.)

University of Wales, Aberystwyth. B.Sc. Hons. Agriculture: 3 years. Normally 3 'A' level G.C.E. passes in Botany and Biology and preferably in one subject from: Physics, Chemistry, Zoology, Geology. If 'A' level Chemistry is not held, Intermediate Chemistry must be passed during the first year at college. Students are normally expected to spend one year on a farm.

University of Wales, Aberystwyth. B.Sc. Pass Dairy Science: 3 years. As for Aberystwyth B.Sc. Hons. Agriculture described above.

University of Wales, Aberystwyth. B.Sc. Agricultural Botany: 3 years. 2 'A' level G.C.E. passes in Botany or Biology and preferably one subject from Pure Mathematics, Physics, Chemistry, Zoology. If 'A' level Chemistry is not held, Intermediate Chemistry must be passed during the first year at college. Mathematics must be passed at 'O' level.

University of Wales, Aberystwyth. B.Sc. Hons. Agricultural Biochemistry: 3 years. Normally 3 'A' level G.C.E. passes including Chemistry and 2 subjects from Pure and Applied Mathematics, Pure Mathematics, Applied Mathematics, Pure Mathematics with Statistics, Physics, Botany, Zoology, Biology. Mathematics, Physics and Biology must be passed at 'O' level.

University of Wales, Bangor. B.Sc. Hons. Agriculture: 3 years. 3 'A' level G.C.E. passes preferably including Chemistry and 2 subjects from Pure and Applied Mathematics, Physics, Botany, Zoology, Biology (not with Botany or Zoology). Candidates must have completed one year's practical farming.

University of Wales, Bangor. B.Sc. Hons. Agricultural Botany: 3 years. 3 'A' level G.C.E. passes in Botany and Biology and preferably Chemistry.

(ii) HIGHER DEGREES

Ph.D. (taken normally after a period of 3 years' research work) is granted in Agricultural subjects by the following Universities: Leeds; Newcastle; Nottingham; Reading; London; Cambridge; Wales (Aberystwyth and Bangor).

University of Cambridge. M.Sc. This degree is granted to graduates who undertake approved research for a period of at least 2 years.

University of Leeds. M.Sc.,

University of London. M.Sc. This degree can be gained by research in Agriculture or Horticulture, but Wye College also offers a two-year postgraduate course in Poultry Science.

University of Newcastle. M.Sc. This degree can be gained by research, but there are also two-year postgraduate courses leading to:

- (1) **M.Sc. in Agricultural Engineering**—for engineering and agriculture graduates. Agriculture graduates with only slight training in Mathematics may take a Farm Mechanisation Option.
- (2) **M.Sc. in Soil Science.** This is suitable for graduates in pure sciences. Examination is by thesis and written papers.

University of Nottingham. M.Sc. This degree can be gained by research but there are also one- and two-year courses for suitably qualified graduates leading to this qualification; courses are available in Agricultural Economics, Animal Science, Food Science, Soil Science and Water Relations of Plants.

University of Oxford. D.Phil. Postgraduate research (for a minimum of 6 terms) may be undertaken at the Department of Agriculture or at the Agricultural Economics Institute for this qualification.

University of Oxford. B.Sc. Postgraduate research (for a minimum of 3 to 6 terms) can be undertaken at the Department of Agriculture for this qualification.

University of Oxford. B.Litt. Postgraduate research (for a minimum of 3 to 6 terms) can be undertaken at the Agricultural Economics Research Institute for this qualification.

University of Reading. M.Sc.

University of Reading. M.Agr.Sc. Two-year postgraduate courses of study are available for the degree of M.Agr.Sc. in Agriculture (Crop Production, Animal Production, Poultry Production, Farm Mechanisation or Farm Management and Organisation) and Animal Nutrition.

University of Wales. M.Sc. Aberystwyth and Bangor offer facilities for research. There are also one-year postgraduate courses at Bangor leading to M.Sc. in Crop Production, Animal Nutrition and Agricultural Economics. Candidates sit an examination and present a dissertation.

(iii) UNIVERSITY DIPLOMAS—POSTGRADUATE

University of Cambridge. Diploma in Agriculture. This is a postgraduate course, 2 years for science graduates and one year

for graduates in agriculture. It is to be replaced in 1966 by the Diploma in Agricultural Studies (*see below*).

University of Cambridge. Diplomas in Agricultural Science, Agricultural Economics and Statistics. All these courses occupy one year—occasionally two years—and are open only to honours graduates in Science, Economics, Mathematics or Statistics. The qualification is to be replaced in 1966 by the Diploma in Agricultural Studies (*see below*).

University of Cambridge. Diploma in Agricultural Studies. This is taken after a one-year course. It is a postgraduate qualification involving advanced study of one of the following subjects: Animal Husbandry, Crop Husbandry, Farm Management, Farm Mechanisation, Animal Science, Pedology, Agricultural Botany, Agricultural Entobiology, Agricultural Economics and Agricultural Biometry. Candidates must have an honours degree in a subject appropriate to their chosen field of study. The first examination for this Diploma will be held in June 1966.

University of Leeds. Diploma in Agriculture (Farm Management); Agricultural Bacteriology; Agricultural Chemistry; Agricultural Economics; Agricultural Zoology. These are one-year courses suitable for science graduates.

University of London. Diploma in Farm Business Administration. Wye College offers a one-year postgraduate course leading to this qualification.

University of Oxford. Diploma in Agricultural Economics. This is a one-year postgraduate course at the Agricultural Economics Research Institute.

University of Reading. Diploma in Agricultural Economics. This is a one-year postgraduate course.

University of Wales, Bangor. Postgraduate Diploma in Agricultural Science. A one-year postgraduate course is offered by University College of Bangor. Science graduates are recommended to read a general course in agricultural science. Graduates in agricultural science may specialise in one chosen subject.

University of Wales, Aberystwyth. Postgraduate Courses. Courses are available in: Rural Science, Agricultural Botany, Agricultural Biochemistry, Zoology, Economics, and Economics with Agricultural Economics and Dairy Husbandry.

NATIONAL DIPLOMAS AND CERTIFICATES

Candidates for any of the following agricultural courses must have spent at least one year working on a farm or similar establishment to gain practical experience.

(i) NATIONAL DIPLOMAS

Awarded by the National Agricultural Examination Board, The National Dairy Examination Board, The National Poultry Diploma Examination Board and by The Royal Horticultural Society.

National Diplomas may be obtained in **Agriculture (N.D.A.)**, **Agricultural Engineering, Dairying (N.D.D.)**, **Horticulture (N.D.H.)** and **Poultry Husbandry (N.D.P.)**. There is also a **Diploma in Poultry Technology**. The standard is intermediate between degree courses at universities and one-year courses at Agricultural and Horticultural Institutes. Diploma courses are intended for students aiming at practical careers in farming, although some holders go on to lecturing, advisory and management posts. The courses last two years and are for students aged at least 18, holding G.C.E. in five subjects at 'O' level including English Language; most Colleges prefer applicants with at least one science subject. The preliminary qualifications in Scotland are four 'O' grade passes in the Scottish Certificate of Education including English, Mathematics and Chemistry. From 1964 all candidates for National Diplomas must have worked for at least 18 months on a farm, of which 12 months must have been in the United Kingdom.

Agricultural colleges also run other courses of about the same standard as those for College Diplomas. These differ slightly from the National Diploma courses, each college having its own special emphasis on certain subjects. Candidates for the **National Diploma in Horticulture** must gain a college diploma at the end of two years' full-time study and are granted the National Diploma only after a further year spent in practical work in the industry. But other National Diplomas are granted immediately to students who are successful in the examinations at the end of the two-year course.

Institutions offering National Diploma Courses

<u>College</u>	<u>Duration</u>	<u>Remarks</u>
Agriculture		
Harper Adams Agricultural College, Shropshire	2 years	
Seale-Hayne Agricultural College, Devon	2 years	
Shuttleworth College, Bedfordshire	2 years	Men only
Royal Agricultural College, Gloucestershire	2 years	
Essex Institute of Agriculture	2 years	
Lancashire County Institute of Agriculture	2 years	
Elmwood Agricultural and Technical College, Fife	2 years	

<u>College</u>	<u>Duration</u>	<u>Remarks</u>
Agricultural Engineering		
North-West Wiltshire College of Further Education	2 years	First 2 years leading to Intermediate exemption
Essex Institute of Agriculture	1 year	Final year only
Dairying		
Scale-Hayne Agricultural College	2 years	One-year course for students with degree or N.D.A.
Studley College, Warwickshire	2 years	Women only
Lancashire Institute of Agriculture	2 years	One-year course for students with degree or N.D.A.
Horticulture		
Studley College, Warwickshire	2 years	Women only
Essex Institute of Agriculture	2 years	
Hertfordshire Institute of Agriculture and Horticulture	2 years	
Pershore Institute of Agriculture, Worcestershire	2 years	
Poultry Husbandry		
Harper Adams Agricultural College	2 years	
Poultry Technology		
Harper Adams Agricultural College	3 years	

National Diploma in Horticulture with Honours. Candidates for this qualification must already hold the N.D.H. The examination takes the form of three written papers to test the candidate's knowledge of recent developments in horticulture, a special study written before the examination and a viva voce and practical test.

(ii) NATIONAL CERTIFICATES

Awarded by the National Certificate in Agriculture Examinations Board.

National Certificates in Agriculture, Horticulture and Poultry Practice. These qualifications are taken at the end of one-year full-time courses provided by Agricultural and Horticultural Institutes which are run by local education authorities. Students, who must be at least 16 years of age, usually intend to become farm foremen, head stockmen or to start farming on their own account.

Some students choose to take an alternative course leading to an Institute Certificate; this would be of roughly the same standard as the National Certificate but provides a slightly different syllabus, depending on the interests of the particular Institute. There is no

precise entry requirement for these courses, although two or three passes in G.C.E. 'O' level are desirable and one year's practical experience is essential.

The course for the National Certificate in Agriculture, to take one example, includes crop and animal husbandry, agricultural science, farm calculations and book-keeping, farm management, veterinary hygiene, poultry husbandry, horticulture, and care and operation of farm machinery.

Most Institutes accept women on general agriculture, horticulture or poultry courses.

The Examinations Board is associated with the City and Guilds of London Institute.

Colleges offering courses leading to National Certificates

In Agriculture

Berkshire Institute of Agriculture; Cheshire School of Agriculture; Cumberland and Westmorland Farm School; Derbyshire Farm Institute; Devon School of Agriculture; Dorset Farm Institute; Durham County School of Agriculture; Essex Institute of Agriculture; Gloucestershire Farm Institute; Hampshire County Farm Institute; Hertfordshire Institute of Agriculture and Horticulture; Kent Farm and Horticultural Institute; Lancashire County Institute of Agriculture; Leicestershire and Rutland Farm Institute; Lincolnshire (Kesteven) Farm Institute; Lincolnshire (Lindsey) Farm Institute; Norfolk School of Agriculture; Northamptonshire Institute of Agriculture; Kirkley Hall Farm Institute; Nottinghamshire Farm Institute (with Home Economics); Shropshire Farm Institute; Somerset Farm Institute (in Dairy Farming); Staffordshire Farm Institute (with Home Economics); Surrey Farm Institute; East Sussex School of Agriculture; Warwickshire Institute of Agriculture; Lackham School of Agriculture (with Home Economics), Wiltshire; Yorkshire (East Riding) Institute of Agriculture; Yorkshire (West Riding) Institute of Agriculture; Glynllifon Agricultural Institute; Golden Grove Farm Institute, Carmarthenshire; Llysfas Farm Institute, Denbighshire; Monmouthshire Institute of Agriculture and Horticulture.

In Horticulture

Essex Institute of Agriculture; Hertfordshire Institute of Agriculture and Horticulture; Kent Farm and Horticultural Institute; Lancashire Institute of Agriculture;

Somerset Farm Institute; Pershore Institute of Horticulture; Yorkshire (West Riding) Institute of Agriculture; Celyn Horticultural Institute, Flintshire.

In Poultry Practice

Cumberland and Westmorland Farm School; Lancashire Institute of Agriculture; Sussex School of Agriculture; Monmouthshire Institute of Agriculture and Horticulture.

COURSES FOR WOMEN

Apart from the general agricultural courses to which women are admitted, there are a number of courses specifically for women which include some agricultural study. An example of these is the course in Rural Domestic Economy in which cooking and preserving are studied; this would lead to lecturing and demonstrating work in Adult Education. The increasing amount of paper work on farms has led to a demand for well-trained secretaries/book-keepers who have some understanding of farm economy.

Institutions offering special courses for women (all courses last one year unless otherwise stated):

<u>College</u>	<u>Course</u>
Caernarvon Farm Institute	Agriculture and Home Economics
Carmarthenshire Farm Institute	Dairying, Poultry and Rural Domestic Economy (R.D.E.)
Cheshire School of Agriculture	Agriculture with R.D.E.
Cumberland and Westmorland Farm School	Dairy Husbandry and Home Economics
Denbigh Farm Institute	Farm Accounts
Leicestershire Farm Institute	Farm Secretaries
Lincolnshire (Lindsey) Farm Institute	Farm Secretaries
Monmouthshire Institute of Agriculture	Agriculture with R.D.E.
Northumberland Farm Institute	Agriculture and Rural Home Economics
Nottinghamshire Farm Institute	Agriculture with Rural Home Economics
Staffordshire Farm Institute	Agriculture with Home Economics
Staffordshire Farm Institute	Farm Secretarial Course (12 weeks)
Warwickshire, Studley College	Farm records, accounts and agriculture
Wiltshire School of Agriculture	Rural Home Economics
Yorkshire (East Riding) Institute of Agriculture	Livestock, R.D.E. and general agriculture

CITY AND GUILDS OF LONDON INSTITUTE CERTIFICATES

Courses for the City and Guilds of London Institute are offered at a number of technical and other colleges.

The courses are taken by apprentices and part-time students as

well as by some full-time students. Many of the part-time students are those working on an approved farm for three years and receiving day release to attend classes under the National Apprenticeship Scheme.

Examinations are conducted by the City and Guilds of London Institute in the following subjects:

- Agricultural Mechanic's Certificate (260)
- Agricultural Engineering Technician's Certificate (261)
- Horticulture (Stage I) General Horticulture (262)
- General Agriculture (Stage I) Crop Husbandry (265)
- General Agriculture (Stage I) Animal Husbandry (266)
- General Agriculture (Stage I) Farm Machinery (Introductory) (267)
- General Agriculture (Stage II) Crop Husbandry (268)
- General Agriculture (Stage II) Animal Husbandry (269)
- General Agriculture (Stage II) Farm Machinery, Operation and Care (270)
- General Agriculture (Stage II) Records and Accounts (271)
- General Agriculture (Stage II) Farm Maintenance and Repair (272)
- Horticulture (Stage II) Principles and Practice (273)
- Horticulture (Stage II) Machinery (274)
- Horticulture (Stage II) Records and Accounts (275)
- Horticulture (Stage II) Foremanship (Local Authority Services) (276)
- Horticulture (Stage III) Organisation and Management (277)
- General Agriculture (Stage III) Organisation and Management (278)
- Milk Pasteurisation and Distribution (159)
- Milk Processing and Control (160) (Intermediate, Final and F.T.C.).

CERTIFICATES AWARDED BY THE REGIONAL EXAMINING UNIONS

(i) UNION OF LANCASHIRE AND CHESHIRE INSTITUTES

Examinations are conducted in General Horticulture and Senior Horticulture; a Rural Course Certificate is awarded and also a certificate in General Agriculture.

(ii) UNION OF EDUCATIONAL INSTITUTES

Examinations are conducted in the following subjects:

- Crop Husbandry; Animal Husbandry; Farm Accounts;
Farm Machinery; Horticulture.

(iii) NORTHERN COUNTIES TECHNICAL EXAMINATIONS COUNCIL

Examinations are conducted in Agriculture and Dairy Technology.

Courses are offered in Animal Husbandry and Farm Machinery; Crop Husbandry and Farm Mechanisation. The Council's Certificates compare in standard with the C.G.L.I.'s Certificate in General Agriculture, Stage I.

OTHER QUALIFICATIONS

- (i) AWARDS OF THE ROYAL HORTICULTURAL SOCIETY: Vincent Square, Westminster, London, S.W.1.

Apart from the National Diploma in Horticulture (*see page 411*) the Society awards two qualifications.

General Examination in Horticulture. This is an elementary examination open to professional or amateur gardeners. Successful candidates receive a certificate. Candidates must be at least 17 years old. The examination covers the principles and practice of gardening.

Teacher's Diploma in School Gardening. This examination is open only to the professional teacher of school gardening. It is taken in two parts—Intermediate and Final. Admission to the Intermediate is granted to candidates who have completed a course of teacher training and have had subsequent relevant experience. Exemption from the Intermediate is granted to graduates in Horticulture and holders of the N.D.H. who also hold the Dip.Ed. or are registered as Qualified Teachers by the Department of Education and Science and who have had two years' experience in teaching gardening.

- (ii) AWARDS OF THE ROYAL BOTANIC GARDENS: Kew, Richmond, Surrey.

Diploma and Diploma with Honours: the examinations for the Diploma are taken after a three-year course of lectures and practical work at the Gardens. Students are paid a subsistence allowance. Candidates for the course must be between 18 and 26 and have had at least three years' experience in gardens or nurseries. Normally they should hold G.C.E. (or an approved equivalent) 'O' level passes in four subjects including an English subject and Mathematics or an approved science; or in three subjects which are one English subject, Mathematics and an approved science; or the preliminary examination for the National Diploma in Horticulture or the Royal Horticultural Society's General examination; or an equivalent examination.

The Diploma is awarded to those who have reached a satisfactory

standard in the course practical work and, in the final examinations, the Diploma with Honours to those whose standard in each is outstandingly high.

The syllabus covers, among other subjects:

Botany; Plant Ecology and Genetics; Horticultural Chemistry and Physics; Arboriculture; Glasshouse Management; Commercial Horticulture; Seed Control; Climatology; Land Surveying and Landscaping; Horticultural Machinery; Business Procedure.

The course covers many of the subjects required for section I (General Horticulture) of the N.D.H. Final examination, and is also a useful preparation for the Certificate and Diploma in Arboriculture and gives exemption from the Intermediate examination of the Institute of Park and Recreation Administration. These observations apply equally to the certificates of the Royal Botanic Garden, Edinburgh.

- (iii) ROYAL ASSOCIATION OF BRITISH DAIRY FARMERS' CERTIFICATES:
17, Devonshire Street, London, W.1.

These Certificates are awarded in dairying and cheese-making and may be obtained by students at Farm Institutes. The courses are designed to complement the more general course for the Dairying Certificates of the individual Institutes.

SCOTLAND

The pattern of qualifications and teaching establishments in Scotland is similar to that in England and Wales, and Scottish Diplomas and College Certificates in Agricultural subjects correspond with those described above.

There are no Farm Institutes and students at this level would either study part-time for the City and Guilds of London Institute Certificates while working on an approved farm under the Scottish National Apprenticeship scheme or take a course leading to a college certificate. Three Central Institutions specialise in Agriculture.

(i) DIPLOMAS

Full-time Diploma courses lasting three years are offered as follows (the standard of the Diploma is that of the Pass degree):

Scottish Diploma in Agriculture

North of Scotland College of Agriculture

Edinburgh and East of Scotland College of Agriculture

West of Scotland Agricultural College

Scottish Diploma in Agriculture/Dairying

As for Diploma in Agriculture

Scottish Diploma in Agriculture/Poultry Husbandry

West of Scotland Agricultural College

Scottish Diploma in Dairying

North of Scotland College of Agriculture

West of Scotland Agricultural College

Scottish Diploma in Dairy Technology

West of Scotland Agricultural College

Scottish Diploma in Dairying (Poultry Technology)

West of Scotland Agricultural College

Scottish Diploma in Horticulture

West of Scotland Agricultural College

Scottish Diploma in Poultry Husbandry

West of Scotland Agricultural College

College Diploma in Agricultural Engineering

West of Scotland Agricultural College

(ii) COLLEGE CERTIFICATES

These are taken after two years' study and are of a lower standard than the Diplomas.

College Certificate in Agriculture

North of Scotland College of Agriculture

Edinburgh and East of Scotland College of Agriculture

West of Scotland Agricultural College

College Certificate in Book-keeping

West of Scotland Agricultural College

College Certificate in Poultry Husbandry

West of Scotland Agricultural College

College Certificate in Practical Horticulture

Edinburgh and East of Scotland College of Agriculture

College Certificate in Agricultural Engineering

West of Scotland Agricultural College

A number of colleges offer courses in general agriculture, pre-vocational courses and short training courses in agricultural subjects; these are not listed as they do not lead to any specific qualification.

(iii) THE ROYAL BOTANIC GARDEN: Edinburgh, 3.

Certificate, Certificate with Distinction and Edinburgh Diploma in Horticulture: these three qualifications are all awarded on the result of 20 or so examinations and practical work undertaken by student gardeners who take the three-year course

of instruction in the theory and practice of Horticulture at the Garden.

The Certificate is awarded to students whose average mark in the examinations and practical is below 65%; the Certificate with Distinction for an average of 65% to 74%; and the Edinburgh Diploma in Horticulture for an average of 75% or over.

The syllabus includes, among others, the following subjects:

Arboriculture; Climatology; Commercial Horticulture; Landscaping; Genetics and Plant Breeding; Weed and Pest Control; Surveying and Mensuration; Elementary Soil Science; Plant Propagation and Pathology; Glass-house Design and Management.

NORTHERN IRELAND

Ulster Diploma in Dairying (U.D.D.) and Ulster Diploma in Poultry Husbandry. These examinations are both taken after a three-year course, the minimum entry requirements for which are G.C.E. 'O' level, S.C.E. 'O' grade or Senior Certificate of the Ministry of Education for Northern Ireland passes in six subjects, including English Language, Mathematics and one from Chemistry, Biology or Physics, *or* credits in any two subjects in the Senior Certificate examination *or* grade 3 and over G.C.E. or S.C.E. 'O' level passes, *or* two 'A' level passes in any one of these examinations.

The courses are intended as a preparation for a career in advisory work or management.

Graduates in science or agriculture may complete the courses in two years.

These courses may be taken at Loughry Agricultural College, Co. Tyrone.

Certificates of the Loughry Agricultural College, Co. Tyrone. Certificates are awarded in Poultry Husbandry and Dairying after a one-year full-time course at the college. Candidates must be at least 17 years old. There are no specified entry requirements.

Certificates of Greenmount Agricultural College, Co. Antrim. These are awarded at the end of the one-year Agricultural and Horticultural courses at the college. Candidates must normally be at least 17 years old, but exceptions may be made for younger students who have G.C.E., or equivalent, passes.

All applicants sit a competitive entrance examination, which consists of Agricultural or Horticultural subjects, Elementary English and Mathematics.

These courses are designed primarily for those who intend to return to their own farms and also as a preparation for a university degree course in agriculture.

ARBITRATION

The Institute of Arbitrators

16, Park Crescent, London, W.1

The Institute exists to promote the settlement of disputes by arbitration.

(i) CORPORATE MEMBERS

Fellow (F.I.Arb.). Holders of the Fellowship of approved professional bodies (*see list A below*) who are at least 30 years old and

INSTITUTE OF ARBITRATORS

Founded 1915

The Institute seeks to promote the settlement of disputes by arbitration; to afford instruction in the law and practice of arbitration; to admit qualified persons to membership and foster their interest; to maintain a panel of experienced arbitrators; and to provide a central organisation in furtherance of its objects.

Practice Arbitrations are arranged; lecture meetings are held; and examinations take place twice yearly.

**16 Park Crescent
London, W.1**

have passed one of the examinations in list B below and the oral and/or written examinations of the Institute of Arbitrators in Law of Arbitration, Procedure and Evidence and Law of Contracts may be elected as Fellows of the Institute.

Associate (A.I.Arb.). Holders of the Fellowship or Associateship of approved professional bodies (*see list A below*) who are at least 21 years old and have passed one of the examinations in list B below and the oral and/or written examinations of the Institute of Arbitrators, as described in Fellowship above, may be elected as Associates of the Institute.

List A

Barristers and Solicitors
 Institute of Chartered Accountants (in England and Wales, of Scotland, in Ireland or of South Africa)
 Society of Incorporated Accountants and Auditors
 Association of Certified and Corporate Accountants
 Institute of Actuaries
 Chartered Institute of Secretaries
 Chartered Insurance Institute
 Institute of Bankers
 Royal Institute of British Architects
 Royal Institution of Chartered Surveyors
 Incorporated Association of Architects and Surveyors
 Chartered Auctioneers' and Estate Agents' Institute
 Incorporated Society of Auctioneers and Landed Property Agents
 Land Agents' Society
 Institution of Civil Engineers
 Institution of Electrical Engineers
 Institution of Mechanical Engineers
 Institution of Municipal and County Engineers
 Institution of Structural Engineers
 Registered Architects
 Institute of Chartered Shipbrokers
 Royal Institution of Naval Architects
 Institute of Quantity Surveyors

List B

Bar	..	..	..	..	..	..	Final
Law Society	..	..	..	..	..	..	Final
Institute of Chartered Accountants (in England and Wales, of Scotland, in Ireland or of South Africa)	..	..	..	..	..	..	Intermediate
Society of Incorporated Accountants and Auditors	..	..	..	..	..	..	Intermediate
Association of Certified and Corporate Accountants	..	..	..	..	..	..	Intermediate
Institute of Actuaries	..	..	..	..	..	..	Entrance Examination
Chartered Institute of Secretaries	..	..	..	..	..	..	Final
Chartered Insurance Institute	..	..	..	..	..	..	Associateship
Institute of Bankers	..	..	..	..	..	..	Associateship
Royal Institute of British Architects	..	..	..	..	..	..	Final
Royal Institution of Chartered Surveyors	..	..	..	..	..	..	Intermediate (all sections)

Incorporated Association of Architects and Surveyors	Final
Chartered Auctioneers' and Estate Agents' Institute	Intermediate
Incorporated Society of Auctioneers and Landed Property Agents	Intermediate
Land Agents' Society	Full Examination
Institute of Builders	Final
Institute of Chemistry	Associateship
Institution of Civil Engineers	Associateship
Institution of Electrical Engineers	Associateship
Institution of Mechanical Engineers	Intermediate
Institution of Municipal Engineers	Intermediate
Institution of Structural Engineers	Associateship
Valuers' Institution	Final

(ii) NON-CORPORATE MEMBERS

Subscribers. The Council may elect as a Subscriber a person who is not a professional arbitrator but is interested in this work.

Retired Members. Fellows and Associates of at least ten years' standing may transfer to this class on retirement.

(iii) HONORARY MEMBERS

The Council may elect as an honorary member a person who, by his experience in Arbitration or other fields, seems likely to promote the interest of the Institute.

ARCHAEOLOGY

Note. Membership of the Royal Archaeological Institute (c/o The London Museum, Kensington Palace, London, W.8) is by subscription.

UNIVERSITY DEGREES

(i) FIRST DEGREES

Belfast. B.A. Archaeology: 3 or 4 years. Entry requirements: 2 'A' level G.C.E. passes. Mathematics should be passed at least at 'O' level.

Belfast. B.Sc. Archaeology: 3 or 4 years. Entry requirements: 2 'A' level G.C.E. passes. Passes at 'A' or 'O' level must

include Mathematics, Physics, Chemistry and French or German or Russian.

Birmingham. B.A. Hons. Ancient History and Archaeology: 3 years. Entry requirements: 3 'A' level G.C.E. passes.

Birmingham. B.A. Combined Honours, Archaeology and History: 3 years. Entry requirements: 3 'A' level passes.

Edinburgh. M.A. Archaeology: 4 years. Entry requirements: 2 'A' level G.C.E. or S.C.E. passes, including one foreign language—classical or modern. Latin should be offered at 'O' level.

Exeter. B.A. Combined Honours, History and Archaeology: 3 years. Entry requirements: 2 'A' level G.C.E. passes including History. Latin must be passed at least at 'O' level.

Glasgow. M.A. Combined Honours, Archaeology and Medieval History: 4 years. Entry requirements: 3 'A' level G.C.E. or S.C.E. passes including a language other than English. Latin must be passed at least at 'O' level.

Leicester. B.A. Combined Studies in British Archaeology: A new course announced in January 1966.

Liverpool. B.A. Hons. Ancient and Medieval History and Archaeology: 3 years. Entry requirements: preferably 3 'A' level G.C.E. passes, which must include Latin and History. A modern foreign language must be passed at 'O' level. (This course may also be taken with Combined Honours.)

Wales (Cardiff). B.A. Archaeology: 3 years. Entry requirements: 2 'A' level G.C.E. passes. Latin should be passed at least at 'O' level.

Wales (Cardiff). B.Sc. Archaeology: 3 or 4 years. Entry requirements: for 3-year course—3 'A' level G.C.E. passes preferably including a biological subject, and Mathematics compulsory, and preferably Latin at 'O' level. 4-year course—2 'A' level G.C.E. passes with the same preferred and compulsory subjects.

Archaeology may also be taken as one subject in a combined honours course for the following degrees:

Birmingham. B.A.: with Drama, English, French, Geography, German, Ancient or Modern Greek, Italian, Latin, Mathematics, Philosophy, Physical Education, Psychology, Russian, Spanish, or Theology.

Birmingham. B.Sc.: with Geology.

Cambridge. B.A. Archaeology and Anthropology: both parts of the tripos may be taken in these subjects.

Exeter. B.A.: with Geography.

Glasgow. M.A.: with Geography or Scottish History.

Wales (Cardiff). B.Sc.: with Botany, Geology or Zoology.

(ii) HIGHER DEGREES

Students may be accepted to study for higher degrees at the universities listed above as offering first degrees in archaeology.

(iii) UNIVERSITY DIPLOMAS AND CERTIFICATES

The following universities offer courses leading to diplomas and certificates:

Cambridge: Certificate in Prehistoric Archaeology. This is awarded after a one-year course open to members of the university.

Durham: Diploma in the Archaeology of Britain. The one-year course for this diploma is open to graduates of approved universities.

Liverpool: Diploma in Archaeology. The one- or two-year course for this diploma is open to graduates; the diploma is granted on thesis and examination.

Liverpool: Certificate in Archaeology. This is taken after a one-year course.

London: Academic Postgraduate Diploma in Archaeology. (Institute of Archaeology, University College, School of Oriental and African Studies.) Chinese, Classical, Egyptological, European, Indian, Islamic, South-east Asian, Western Asian or Prehistoric archaeology. Normally taken after two years' full-time study.

London: Diplomas awarded by the Institute of Archaeology. Diplomas in conservation of historical monuments and conservation of archaeological materials are awarded after two-year postgraduate courses.

London (University College): Diploma in Micropaleontology. This is taken after a one-year postgraduate course.

London: Extramural Diploma in Archaeology. This is awarded to students who complete successfully a four-year course of extramural study.

Oxford: Diploma in Archaeology. The diploma may be taken in classical or European archaeology and is confined to members of the university who take a one-year course. The Diploma in Prehistoric Archaeology may be taken by non-members of the university.

Wales (Aberystwyth): Diploma in Micropaleontology. This is taken after a one-year postgraduate course.

Glasgow: Diploma in Greek History and Archaeology, Diploma in Roman History and Archaeology. These diplomas are taken after one-year courses.

Postgraduate courses in Micropaleontology are also available at Imperial College, London.

ARCHITECTURE

Architects Registration Council of the United Kingdom
 (established under the Architects (Registration) Acts, 1931-38)
 68, Portland Place, London, W.1

Before he may practise, an architect must apply for his name to be placed on the Register of the Architects Registration Council of the United Kingdom (A.R.C.U.K.). In order to have his name put on the Register he must pass one of the professional examinations recognised by the Council.

On the recommendation of its Board of Architectural Education, the Council recognises the following British examinations (together with the examination in Professional Practice and practical experience) as qualifying for registration under the provisions of the Architects (Registration) Acts, 1931-38. The Council makes no distinction in status between degrees and diplomas in Architecture. (The Council is itself empowered to hold an examination in Architecture, but the Board has not recommended that it should.)

Professional Examinations

- Final and Special Final Examinations of the Royal Institute of British Architects
- Final Examination for the Diploma (A.A.Dipl.) of the Architectural Association School of Architecture.

University degree examinations

- University of Edinburgh (B.Arch.); University of Liverpool (B.Arch.); University of London (B.A., B.Sc.(Arch.)); University of Manchester (B.A.); University of Newcastle (B.Arch.); University of Sheffield (B.A., B.Arch.); University of Strathclyde (B.Arch.); University of Wales (B.Arch.).

University diploma examinations. (Some of these courses have been converted or are being converted into degree courses, *see below*.)

- University of Bristol (in association with the Royal West of England School of Architecture) (Dip.Arch.R.W.A.); University of Cambridge (Dip.Arch.(Cantab.)); University of Edinburgh (D.A.); University of Liverpool (Dip.Arch.(L'pool)); University of London (Dipl.Arch.(U.C.L.)); University of Manchester (Dip.Arch.(Manchester)); University of Newcastle (Dip.Arch.(Dunelm)); University of Nottingham (Dip.Arch.(Nottm.)); University of Sheffield (Dip.Arch.(Sheffield)); University of Strathclyde (D.A.(Glas.)); Welsh College of Advanced Technology (Dip.Arch.(Wales)).

Diploma in Architecture examinations of the following institutions

- Robert Gordon's Technical College, Aberdeen (Dip.Arch.(Abdn.)); Birmingham College of Arts and Crafts (Dip.Arch.(Birm.)); Brighton College of Arts and Crafts (Dip.Arch.(Brighton)); City of Canterbury College of Art (Dipl.Arch.(Canterbury)); Duncan of Jordanstone College of Art, Dundee (D.A.(Dundee)); Edinburgh College of Art (D.A.(Edin.)); Kingston-upon-Thames School of Art (D.Arch.(Kingston)); Kingston-upon-Hull Regional College of Arts and Crafts (Dipl.Arch.(Hull));

Leeds College of Art (Dipl.Arch.(Leeds)); Leicester College of Art (Dip.Arch.(Leic.)); Hammersmith College of Art and Building (Dip.Arch.(Hammersmith)); Northern Polytechnic (Dipl.Arch.(Northern Polytechnic)); The Polytechnic, Regent Street (Dip.Arch.(The Polytechnic)); Oxford College of Technology (Dipl.Arch.(Oxford)); Southern College of Art, Portsmouth (Dipl.Arch.(Portsmouth)); Southend Municipal College (Dip.Arch.(Southend)).

MEMBERSHIP OF PROFESSIONAL ASSOCIATIONS

The Royal Institute of British Architects

(incorporated 1837)

66, Portland Place, London, W.1

Membership of the R.I.B.A. is not a condition of registration by A.R.C.U.K. but it confers a widely recognised status.

(i) NON-CORPORATE MEMBERS

Probationer.

Student. Candidates may enrol as Student members after passing the Intermediate examination.

(ii) CORPORATE MEMBERS

Licentiate (L.R.I.B.A.). Before the end of 1955 architects registered under the Architects (Registration) Act, 1931, who were at least 30 and met certain requirements as to experience were admitted to corporate membership as Licentiates. Admission to the class is now closed.

Associate (A.R.I.B.A.). Entrants to the profession apply to become Associates when they have passed the Final examination Part 3.

Fellow (F.R.I.B.A.). Fellows are elected from the Associate and Licentiate grades; candidates must be at least 30. Licentiates wishing to become Fellows are required to pass a special qualifying examination unless they are over 60.

(iii) HONORARY MEMBERSHIP

The Institute may elect Honorary Fellows, Honorary Associates and Honorary Corresponding Members.

(iv) PROFESSIONAL EXAMINATIONS

The Board of Architectural Education of the Royal Institute of British Architects does not provide training itself but it approves

courses arranged by Universities and other Schools of Architecture. The R.I.B.A. began exempting from its own examinations students who had passed the examinations of recognised institutions in 1902 and later established the Board to control and operate the examinations taken by prospective architects. Most candidates take a five-year course of training leading to the Final examinations of one of the recognised Schools of Architecture. Some take courses of direct preparation for the R.I.B.A.'s own examinations in further education and other establishments.

Candidates normally take an Intermediate examination after three years and then enrol as Student members of the R.I.B.A. Parts 1 and 2 of the Final examination are taken after two further years' full-time study. After two more years' practical experience (of which one at least must be after passing Parts 1 and 2) candidates take Part 3 of the Final examination in Professional Practice and Practical Experience.

Successful candidates may then apply for their names to be placed on the A.R.C.U.K. Register, which enables them to practise, and may apply to become Associate members of the R.I.B.A.

Intermediate examination. Candidates must be at least 19 and have the G.C.E., S.C.E. or the Scottish University Preliminary Examination in five subjects, including English Language, and mathematics or a science subject; at least two passes must be at 'A' level or Higher grade. Before taking the examination students must submit 'Testimonies of Study', sheets of drawings dealing with specified subjects; they must have spent at least two years either in full-time attendance at a School of Architecture or working under the direction of a registered architect. The examination consists of papers in:

The History and Appreciation of Architecture; Design and Construction; General Applied Construction; Building Science.

Final Parts 1 and 2. Candidates must be at least 21 and have already gained approval for sheets of drawings dealing with four 'Problems in Design'. Candidates must pass Part 1 before taking Part 2. The examinations consist of:

Part 1

Advanced Applied Construction; Building Science.

Part 2

Examination Testimony of Study; Design and Construction.

Final Part 3: Professional Practice and Practical Experience. Candidates are examined in:

Building Law, Building Regulations, Building By-Laws, Contracts, Scale of Charges, Code of Professional Conduct of the R.I.B.A. and A.R.C.U.K.

Written papers on Professional Practice are supplemented by an oral examination.

Special Final Examination. This examination is open to persons already in architectural practice and architectural assistants over the age of 35, whose applications are approved by the Board of Architectural Education; candidates are not required to have passed the Intermediate examination.

EXEMPTIONS

Schools of Architecture recognised for exemption from R.I.B.A. Intermediate and Final Parts 1 and 2

Universities

University of Cambridge (Dip.Arch.); University of Edinburgh (D.A.); University of Liverpool (B.Arch., Dip.Arch.); University of London (B.A., Dipl.Arch.); University of Manchester (B.A., Dip.Arch.); University of Newcastle (B.Arch., Dip.Arch.); University of Nottingham (B.A., B.Arch.); University of Sheffield (B.A., B.Arch., Dip.Arch.); University of Strathclyde (B.Arch., D.A.); Welsh College of Advanced Technology (B.Arch., Dip.Arch.).

Other Institutions

Robert Gordon's Technical College, Aberdeen (Dip.Arch.(Abdn.)); Birmingham College of Arts and Crafts (Dip.Arch.(Birm.)); Brighton College of Arts and Crafts (Dip.Arch.(Brighton)); Royal West of England School of Architecture, Bristol (Dip.Arch.(R.W.A.)); City of Canterbury College of Art (Dipl.Arch.(Canterbury)); Duncan of Jordanstone College of Art, Dundee (D.A.(Dundee)); Edinburgh College of Art (D.A.(Edin.)); Kingston-upon-Hull Regional College of Art (Dipl.Arch.(Hull)); Leeds College of Art (Dipl.Arch.(Leeds)); Leicester College of Art (Dip.Arch.(Leic.)); Architectural Association School of Architecture, London (A.A.Dipl.); The Polytechnic, Regent Street (Dip.Arch.(The Polytechnic)); The Northern Polytechnic (Dipl.Arch.(Northern Polytechnic)); Hammersmith College of Art and Building (Dip.Arch.(Hammersmith)); Nottingham College of Art (Dip.Arch.(Nottm.)); Oxford College of Technology (Dipl.Arch.(Oxford)); Southern College of Art, Portsmouth (Dipl.Arch.(Portsmouth)); Southend Municipal College (Dip.Arch.(Southend)).

Schools of Architecture recognised for exemption from R.I.B.A. Intermediate

Queen's University, Belfast (B.Sc.); Bristol College of Science and Technology (B.Sc.); Glasgow School of Art (School Certificate); Inner London Education Authority School of Building (College Diploma) Manchester College of Art and Design (D.A.(Man.)).

COURSES IN DIRECT PREPARATION FOR R.I.B.A. EXAMINATIONS

<u>College</u>	<u>Duration</u>	<u>Examination</u>
Colleges of Advanced Technology		
Bristol College of Science and Technology	5 years sandwich	Final
Welsh College of Advanced Technology	5 years full-time	Final
Other Institutions		
Birmingham College of Arts and Crafts	5 years full-time	Final
Bournemouth Municipal College of Art	3 years full-time	Inter- mediate
Brighton College of Art	5 years full-time	Final
City of Canterbury College of Art	5 years full-time	Final
South-West Essex Technical College	5 years full-time	Final
Gloucestershire College of Art	3 years full-time	Inter- mediate
Huddersfield School of Art	5 years full-time	Final
Kingston-upon-Hull Regional College of Art	5 years full-time	Final
Leeds College of Art	5 years full-time	Final
Leicester College of Art	5 years full-time	Final
Liverpool College of Building	4 years sandwich or 6 years full-time	Final
I.L.E.A. School of Building, Brixton	5 years full-time	Final
Hammersmith College of Art and Building	5 years full-time	Final
Northern Polytechnic	5 years full-time	Final
The Polytechnic, Regent Street	5 years full-time	Final
Manchester College of Art and Design	5 years full-time	Final
Nottingham College of Arts and Crafts	5 years full-time	Final
Oxford College of Technology	5 years full-time	Final
Southern College of Art, Portsmouth	5 years full-time	Final
Plymouth College of Art	5 years full-time	Final
Southend Municipal College	5 years full-time	Final
Kingston-upon-Thames School of Art	5 years full-time	Final

The Incorporated Association of Architects and Surveyors

(founded 1925)

29, Belgrave Square, London, S.W.1

The Association is made up of members from all the professions connected with building, land and property; it conducts examinations in Land Surveying, Fire Surveying and Valuation and Estate Management Surveying, but not in architecture. Architect members are elected in respect of other qualifications.

(i) GRADES OF ARCHITECT MEMBERSHIP

Architect members are elected in respect of other qualifications to the following grades: **Associate (A.I.A.A.)**; **Fellow (F.I.A.A.)**.

(ii) CORPORATE SURVEYOR MEMBERS

Fellows (F.I.A.S.). Fellows must be at least 30, either be Associate members or have passed the Professional Examination and be in practice on their own account for not less than five years or in a position of equal responsibility for the same period.

Associate (A.I.A.S.). Associates must be not less than 22, have completed at least five years' approved training in a professional office (two years in the case of those who have completed an approved full-time course of study) and have passed or been exempted from the Professional Examination.

(iii) NON-CORPORATE SURVEYOR MEMBER

Student members must be not less than 16, be in approved employment or following a course of training, have five G.C.E. 'O' level passes (including English Language and Mathematics) or the equivalent and undertake to pass the Professional Examination within five years.

EXAMINATIONS

The Professional Examination leads to full professional membership in the Building Surveyors, Municipal Building Surveyors and Quantity Surveyors sections of the Association. The examination is in three parts, the first of which is common to all three sections. Candidates must be Student members of the Association and have undergone an appropriate course of training, normally of three years' full-time study or the equivalent.

The Association conducts an examination for a **Certificate of Proficiency in 'Working Up' and 'Taking Off'** in the Quantity Surveyors section. The examination is conducted at two levels, Intermediate and Final. Candidates for the Intermediate must be not less than 19 and have had not less than three years' approved training in a recommended school or quantity surveyor's office. Candidates for the Final must be not less than 21 and have had not less than five years' approved training, of which not less than three years must have been spent in an approved quantity surveyor's office.

EXEMPTIONS

Exemptions may be granted from all or part of the Professional Examination in respect of the following qualifications:

H.N.D. and H.N.C. in Building; certain examinations of the Royal Institution of Chartered Surveyors, the Institute of Quantity Surveyors, the Royal Institute of British Architects and the Institution of Mechanical Engineers; certain examinations of the Rating and Valuation Association, the Chartered Auctioneers' and Estate Agents' Institute and the Chartered Land Agents' Society; and the Cambridge B.A. in Geography (Part II of the Geography Tripos with Topographic and Geodetic Surveying), the London University postgraduate Diploma in Land Surveying, the London University B.Sc. (Estate Management) and the Bristol University B.Sc. in Geography with Advanced Surveying at Part II.

The Faculty of Architects and Surveyors

(incorporated 1926)

68, Gloucester Place, London, W.1

The Faculty consists mainly of surveyors and membership of it is not recognised as a professional qualification for Architects. Membership is open to architects and surveyors employed in professional, industrial and commercial offices. Residents of the United Kingdom may not join the Architects' section in any grade except that of Student unless they are already registered as qualified architects with the Architects Registration Council of the United Kingdom. The Faculty conducts examinations for Surveyors.

(i) ARCHITECT MEMBERS

Fellow (F.F.A.S.). Fellows must be at least 30. The restrictions on admission to Associateship apply also to Fellowship. All candidates for election must have had at least five years' responsible experience as architects and submit examples of their work.

Architectural Fellows and Associates are designated 'Incorporated Architects'.

Associate (A.F.A.S.). Associates must be at least 21 and, if they are natives of the United Kingdom, be registered as architects in accordance with the Architects (Registration) Act, 1931. If they are not natives of the United Kingdom, they must be registered in accordance with Commonwealth regulations similar to those of the Architects (Registration) Acts, 1931-38. Such Associates may not practise as architects or use their architectural designatory letters in the United Kingdom. All candidates for election must have had at least four years' experience as architects in a responsible post, be holding a responsible post and submit examples of their work.

Licentiate. Grade discontinued in 1964.

Students must be at least 16 and must satisfy the academic requirements prescribed by the Architects Registration Council of the United Kingdom.

(ii) MEMBERSHIP FOR SURVEYORS AND PRACTITIONERS IN URBAN AND RURAL ESTATE MANAGEMENT

Applicants may be admitted to membership in the light of their qualifications and experience or by examinations. The professional examinations consist of an Intermediate Examination and a Final

or Direct Membership Examination. Associates and Fellows are designated as follows, according to the nature of their specialism:

Incorporated Building Surveyors; Incorporated Valuation Surveyors; Incorporated Land Surveyors; Incorporated Municipal Surveyors; Incorporated Quantity Surveyors; Incorporated Mining Surveyors; Incorporated Civil Engineering Surveyors; Incorporated Estate Surveyors.

Fellow (F.F.S.). Fellows admitted by examination must be at least 30, either have passed the **Final or Direct Membership Examination** and have had five years' experience as Principals or in senior positions or hold equivalent qualifications. Fellows admitted in the light of their experience must be at least 30, have had five years' experience as Principals and submit examples of their work.

Associate (A.F.S.). Associates, admitted by examination, must be at least 21 and have passed the **Final or Direct Membership Examination** and have had two years' approved experience. **Exemption** may be granted to candidates who have passed any of the following:

- Final Examination of the Royal Institute of British Architects
- Final Examination of the Royal Institution of Chartered Surveyors
- Final Examination of the Chartered Auctioneers' and Estate Agents' Institute
- Final Examination of the Chartered Land Agents' Society
- Final Examination of the Incorporated Association of Architects and Surveyors
- Final Examination of the Incorporated Society of Auctioneers and Landed Property Agents
- Final Examination of the Institute of Quantity Surveyors
- Final Examination for the B.Sc. (Estate Management) of London University
- Home Office Certificate for Proficiency in Mining Surveying
- Equivalent overseas examinations.

Associates admitted in the light of their qualifications and experience must be at least 25, have had at least four years' responsible experience as Surveyors and submit examples of their work.

Licentiate (L.F.S.). Licentiates must be at least 21 and have passed the **Intermediate Examination**. **Exemption** may be granted to candidates who have passed any of the following:

- Intermediate Examination of the Royal Institute of British Architects
- Intermediate Examination of the Royal Institution of Chartered Surveyors
- Intermediate Examination of the Chartered Auctioneers' and Estate Agents' Institute
- Intermediate Examination of the Chartered Land Agents' Society
- Intermediate Examination of the Incorporated Association of Architects and Surveyors
- Intermediate Examination of the Incorporated Society of Auctioneers and Landed Property Agents
- Intermediate Examination of the Institute of Quantity Surveyors
- Intermediate Examination of the B.Sc. (Estate Management) of London.

Candidates who have passed any of the following may be exempted from certain subjects in the Intermediate Examination:

- Diploma of the Royal Society of Health
- Final Examination of the C.G.L.I. in Builders Quantities and Estimating
- H.N.C. in Building
- Final Examination of the C.G.L.I. in Mine Surveying
- Equivalent overseas examinations.

Students must be at least 16, have obtained G.C.E. 'O' level passes in English Language or four other distinct subjects or in English Language, mathematics and at least two other distinct subjects from among geography, history, foreign languages, sciences (including economics and public and economic affairs), British Constitution, commercial subjects and surveying, or have obtained an equivalent qualification. They must be articulated or committed for a period of not less than three years of training service to a qualified surveyor who is a member of a recognised Faculty, Institution, or Association of Surveyors, practising in a purely professional capacity; or be committed for a period of not less than three years of training service at a recognised university, technical college or college of art.

(iii) HONORARY MEMBERSHIP

The Faculty may appoint Honorary Fellows and Honorary Associates. The honorary officers of the Faculty are: President (P.F.A.S.); Past-Presidents (P.P.F.A.S.); Vice-Presidents (V.P.F.A.S.).

COURSES OF INSTRUCTION

A postal course for the professional examinations is offered by Chambers College, 148, Holborn, London, E.C.1.

The Town Planning Institute

(incorporated 1959)

18, Ashley Place, London, S.W.1

Membership (M.T.P.I.) or Associate Membership (A.M.T.P.I.) of the Institute is the recognised technical qualification for Town Planning appointments in public and private offices in the United Kingdom and overseas.

(i) CORPORATE MEMBERS

Member (M.T.P.I.) and **Legal Member (L.M.T.P.I.)**. Associate Members over 30 with requisite practical experience may apply for transfer to full Membership.

Legal Associate Member (L.A.M.T.P.I.). Candidates must be at least 23, be a qualified solicitor or barrister, have passed the Legal Associateship examination and have had appropriate experience.

Associate Member (A.M.T.P.I.). Candidates must be at least 23, have passed or been exempted from the Institute's examinations and have had two years' satisfactory practical experience.

(ii) NON-CORPORATE MEMBER

Student. Candidates must be at least 18, be or have been engaged as a pupil of a Member or Associate Member of the Institute or of an Architect, Civil Engineer or Surveyor or engaged in a degree or diploma course, and satisfy the minimum academic requirements; the requirements are five G.C.E. 'O' or 'A' level passes, including mathematics and English Language, a third subject (history or geography or a language other than English) and two others from a specified list. At least three passes must have been obtained at one sitting.

(iii) HONORARY MEMBERSHIP

The Institute may elect Honorary Members, Honorary Corresponding Members and Honorary Associates.

(iv) METHODS OF ENTRY TO THE PROFESSION

The two methods of entry to the profession are (a) by taking the examinations of the Institute; or (b) by taking a degree or diploma recognised by the Institute as exempting candidates from its own examinations.

In either case, candidates must have two years' practical experience in town planning.

(v) EXAMINATIONS

There are both **Intermediate and Final Examinations**; candidates for the Intermediate must have been enrolled as Students. Candidates for the Final Examination must be at least 21 and *either* have passed one of the following:

The Intermediate Examination, Parts I and II

The Final Examination of the Royal Institute of British Architects

The Final Examination of the Institution of Civil Engineers

The Final Examination of the Institution of Municipal Engineers

The Final Examination of the Royal Institution of Chartered Surveyors

The Final Examination of the Chartered Auctioneers' and Estate Agents' Institute

Other approved examinations

or hold an approved degree in Architecture, Civil Engineering, Economics, Estate Management, Geography or Sociology. Holders of British and Irish degrees other than these must pass the Survey and Analysis and Drawn Analysis and Design papers in Part II of the Intermediate Examination before proceeding to the Final Examination.

(vi) COURSES

The following colleges of further education offer courses which cover the Institute's syllabus for the Intermediate or Final Examination, either wholly or in part:

Intermediate Examination only

Cambridgeshire College of Arts and Technology; Cornwall Technical College; Coventry Technical College; Hammersmith College of Art and Building; Portsmouth College of Technology; College of Building, Stoke-on-Trent.

Final Examination only

Belfast College of Technology; Lanchester College of Technology, Coventry; Gloucestershire College of Art; Regional College of Art and Crafts, Kingston-upon-Hull; Liverpool College of Building; Northern Polytechnic School of Architecture; Plymouth College of Technology; Welsh College of Advanced Technology.

Intermediate and Final Examinations

Brixton School of Building; Glasgow School of Art; Medway College of Technology, Maidstone; Mid-Essex Technical College; Norwich City College and Art School; School of Architecture and Building, Oxford; Wolverhampton College of Art.

Correspondence Course

College of Estate Management, London, W.8.

EXEMPTIONS

Several universities and colleges provide degree and diploma courses, whose successful completion exempts candidates from the Institute's examinations:

First degrees and diplomas

University of Manchester: B.A. Honours in Town and Country Planning.
 University of Newcastle: B.A. Honours in Land Use Studies.
 Leeds College of Art: College Diploma in Town Planning (Dip.T.P. (Leeds)) (4 years full-time).

Certificates

University of Newcastle: Certificate (3 years part-time or 2 years full-time).
 Birmingham College of Arts and Crafts: Certificate (3 years part-time).
 Edinburgh College of Art: Certificate (3 years sandwich).
 Leeds College of Art: Certificate (3 years part-time).
 Nottingham College of Arts and Crafts: Certificate (3 years part-time).

Higher degrees

University of Liverpool: M.C.D. (Master of Civic Design) (2 years full-time). (Graduates in Architecture who have studied town planning as a substantial part of their degree course may be accepted for a shorter course.)
 University of London (University College): M.A. in Town Planning (2 years full-time).

Postgraduate diplomas

University of Edinburgh: Diploma in Civic Design (2 years full-time).
 University of Liverpool: Diploma in Civic Design (Dip.C.D.(L'pool)) (2 years full-time). (Graduates in Architecture who have studied town planning as a substantial part of their degree course may be accepted for a shorter course.)
 University of London: Diploma in Town Planning (Dip.T.P.(Lond.)) (3 years part-time).
 University of Manchester: Diploma in Town and Country Planning (Dip.T.P.(Manchester)) (2 years full-time or 3 years part-time).
 University of Newcastle: Diploma in Town Planning (Dip.T.P.(Dunelm)) (1 year full-time following the Certificate course).
 University of Strathclyde: Diploma in Town Planning (Dip.T.P.(Glas.)) (3 years part-time or 1 year full-time plus 1 year part-time).
 Architectural Association School of Architecture: A.A.Dipl. (Planning) (discontinued).
 Birmingham College of Arts and Crafts: Diploma in Planning (Dip.T.P.(Birm.)) (3 years part-time or 1 year full-time plus 1 year part-time).
 Edinburgh College of Art: Diploma in Town and Country Planning (Dip.T.P.(Edin.)) (3 years part-time or 1 year full-time plus 1 year part-time).
 Leeds College of Art: Diploma in Town and Country Planning (Dipl. T.P.(Leeds)) (3 years part-time or 1 year full-time plus 1 year part-time).
 The Polytechnic, London, W.1: Dip.T.P. (The Polytechnic) (discontinued).
 Nottingham College of Arts and Crafts: Diploma in Town and Country Planning (Dip.T.P.(Nottm.)) (3 years part-time or 2 years full-time).

The Institute of Landscape Architects

(incorporated 1929)

38, Russell Square, London, W.C.1

(i) NON-PROFESSIONAL MEMBERS

Probationer. Persons studying to become professional landscape architects may apply for admission as Probationers of the Institute. They must have five G.C.E. passes, two of them at 'A' level.

Student Member. Students are persons who are studying or intending to study to become professional landscape architects and who have passed or been exempted from the Part 1 examination.

(ii) PROFESSIONAL MEMBERS

Licentiate (L.I.L.A.). Licentiates are persons not less than 40 who have been professionally engaged in Landscape Architecture for at least 10 years and who satisfy the Institute that they have achieved such a standard as may be specified by the Institute. They are then granted the Certificate of the Institute.

Associate (A.I.L.A.). Associates are persons who have been professionally engaged in Landscape Architecture for at least one year and who satisfy the Institute that they are properly qualified. They are granted the Diploma of the Institute.

Fellow (F.I.L.A.). Fellows are Associates and others who have practised Landscape Architecture for at least seven years and who satisfy the Institute that they are fully qualified. They are granted the Diploma of the Institute.

(iii) HONORARY MEMBERSHIP

The Institute may elect Honorary Fellows, Honorary Associates and Honorary Subscribing Members.

(iv) EXAMINATIONS

The examination for Associateship of the Institute is in three parts. It takes two years to reach Part 1, or three years if the candidate has had no preliminary training. Part 3 may not be taken until two years after Part 1; candidates must be not less than 23 and have had two years' professional and practical experience in the United Kingdom.

(v) COURSES OF TRAINING

Postgraduate

University of Edinburgh: Diploma in Landscape Architecture (2 years full-time).

University of Newcastle: Diploma in Landscape Design (1 year full-time).

Holders of the Diplomas above are exempted from Parts 1 and 2 of the Institute's examinations.

Leeds College of Art: Diploma (2 years full-time).

Other courses

University of London (University College): Certificate in Landscape Design (2 years part-time).

Birmingham College of Art: Certificate in Landscape Architecture (2 years part-time).

Holders of the two Certificates above are exempted from Part 1 of the Institute's examinations.

Gloucestershire College of Art: 4-year full-time course for Parts 1 and 2 of the Institute's examinations.

Nottingham College of Arts and Crafts: 2-year part-time course.

Manchester Regional College of Art: 2-year part-time course.

Leeds College of Art: 4-year full-time course.

UNIVERSITY DEGREES AND DIPLOMAS

In Architecture, Architectural Studies and Land Use Studies.

(i) FIRST DEGREES

Queen's University, Belfast. B.Sc.: 3 years. Students should have two 'A' level G.C.E. passes.

Bristol College of Science and Technology (proposed Bath University of Technology). **B.Sc.** (4 years), **B.Arch.** (2 more years): students should have two 'A' level G.C.E. passes and an 'O' level pass in English Language.

University of Bristol. B.A. (3 years), **B.Arch., B.Sc. in Architecture** (2 more years): students should have two 'A' level G.C.E. passes, one of them in mathematics.

University of Cambridge. B.A. (Architecture) (3 years), **Dip.Arch.** (2 more years). **B.A. (Land Economy)** (3 years).

University of East Anglia. B.A. (History of Architecture): 3 years. Students should have two 'A' level G.C.E. passes.

University of Edinburgh. B.Arch.: 5 years plus 1 year practical. Students are selected by tests and interview.

University of Liverpool. B.Arch.: 5 years. Students should have three 'A' level G.C.E. passes, preferably combining arts and science subjects and including mathematics and physics; they must submit a portfolio of art work.

University of London (Bartlett School of Architecture, University College). **B.A., B.Sc.(Arch.):** each 3 years. Students should have two 'A' level G.C.E. passes, including mathematics.

University of Manchester. B.A. or Dip.Arch.: 5 years.

Students should have three 'A' level G.C.E. passes, preferably including art, mathematics and an applied science.

University of Newcastle. B.A. (3 years), **B.Arch.** (2 more years): students should have two 'A' level G.C.E. passes, preferably combining arts and science subjects and including mathematics.

B.A. in Land Use Studies: 4 years. Students should have two 'A' level G.C.E. passes and mathematics at 'O' level.

University of Nottingham. B.A.: 3 years. Students should have three 'A' level G.C.E. passes, preferably combining arts and science subjects and including art, mathematics and physics; they must submit a portfolio of art work. This course leads to the degree of M.A. or to Dip.Arch. after 5 years.

University of Sheffield. B.A.: 3 years. Students should have two 'A' level G.C.E. passes, preferably including mathematics and physics; they must submit a portfolio of art work. This course leads to the degree of M.A. or to Dip.Arch. after 5 years.

University of Strathclyde. B.Arch. or Dip.Arch.: 5 years. Students should have two 'A' level G.C.E. passes, including mathematics, or the general requirement for the University in terms of S.C.E., including mathematics.

University of Wales (Cardiff and Welsh College of Advanced Technology). B.Arch.: 5 years. Students should have two 'A' level G.C.E. passes.

(ii) HIGHER DEGREES

Queen's University, Belfast. M.Sc. in Architecture, Architectural Engineering or Town and Country Planning: 2 year full-time course after B.Sc. in Architecture.

University of Edinburgh. M.Arch.: The degree of M.Arch. may be taken after a two-year course (one year for Honours graduates of Edinburgh University).

University of Liverpool. M.A. (in historical or theoretical subjects); **M.Arch.:** The degree may be taken by Honours graduates in architecture after a one-year course of higher study or research and by non-Honours graduates in architecture after a two-year course of higher study or research. Suitably qualified non-graduates may be accepted three years after obtaining their professional qualification. Candidates are required to submit a thesis and to be examined orally; a written examination may also be called for.

University of London. M.A., M.Sc.(Architecture), Ph.D.: Courses of instruction leading to the degrees of M.A. and M.Sc. are provided at University College, which also offers facilities for

research work leading to the degree of Ph.D. The M.A. and M.Sc. courses are two-year full-time components of five-year full-time professional courses leading to the degrees of B.A., M.A. or B.Sc., M.Sc.

University of Nottingham. Master's degree in Urban and Regional Planning: introduced 1966; one-year full- and one-year part-time for graduates and other persons with appropriate subjects. **M.A. in Architecture and Environment:** to be introduced in 1968.

University of Sheffield. M.A.: 2 years.

University of Strathclyde. M.Arch.

(iii) UNIVERSITY POSTGRADUATE DIPLOMAS

University of Cambridge. Diploma: 2 years.

University of Edinburgh. Diploma in Architectural Acoustics: a one-year course open to Honours graduates in physics or to qualified architects.

(iv) UNIVERSITY AND OTHER SCHOOL OF ARCHITECTURE DIPLOMAS

Courses leading to Diplomas in Architecture awarded by University and other Schools of Architecture are listed on pages 425 and 426.

ART AND DESIGN

MEMBERSHIP OF PROFESSIONAL ASSOCIATIONS

(Notes on Honorary distinctions (such as R.A.) will be found in Part 5 page 369).

The Incorporated Institute of British Decorators and Interior Designers

(incorporated 1899)

37, Soho Square, London, W.1

Associate (A.I.B.D.). Associates must have had at least four years' practical experience and be at least 21 years of age, and have passed the Institute's examination, full-time and part-time courses for which are run at some fifty schools of art and technical colleges.

For entry to such a course a candidate must possess 'O' level

G.C.E. or S.C.E. passes in four subjects including English Language or English; or a First Class Advanced Craft Certificate or the Full Technological Certificate of the City and Guilds of London Institute plus two passes at G.C.E. 'O' level or Scottish Certificate of Education, one of which must be English Language or English. The course covers practical design, colour theory and practice, and a craft subject.

Licentiate (L.I.B.D.). This class of membership of the Institute is reserved for distinguished members of the profession who, by reason of age or business commitments, cannot take the examination described above. A Licentiate must be at least 32 years of age, must have received training in Interior Design or an allied field and must produce evidence of work, publications or teaching success.

Fellow (F.I.B.D.). A Fellow of the Institute must be at least 25 years of age and should have been an Associate or Licentiate member for at least three years. A Licentiate applying for Fellowship should possess either the National Diploma in Design or Associateship of the Royal College of Art (Interior Design), or the Diploma in Fine Art of the University of London, or any other qualification of comparable status.

Other grades of membership are Honorary Member, Retired Member, and Student.

DEGREES AND DIPLOMAS IN ART

(i) FIRST DEGREES

University of East Anglia. B.A. (specialising in History of Art, Architecture and Music): 3 years. Entry requirements: 2 'A' level G.C.E. passes and evidence of a sound general education in Art subjects.

University of Edinburgh. M.A. Fine Art: 5 years. Entry requirements: 2 S.C.E. Higher Grade passes.

University of Leeds. B.A. Fine Art: 4 years. Entry requirements: 3 'A' level G.C.E. passes including, if possible, a modern foreign language.

University of London, Courtauld Institute. B.A. History of Art: 3 years. Entry requirements: 2 'A' level G.C.E. passes (Art is not acceptable unless it includes History of Art). Passes at 'O' level in 2 foreign languages of which one must be a classical language are also required. A reading knowledge of two modern foreign languages is required and previous study of European History and History of Art is desirable.

University of Manchester. B.A. English and History of Art: 4 years. Entry requirements: 3 'A' level G.C.E. passes in Art subjects (Art is not acceptable unless it includes History of Art at 'A' level). One of these subjects must be English Literature and it is desirable that one of these passes should be in a modern foreign language. 'O' level Latin or Classical Greek is also required.

University of Newcastle. B.A. Fine Art: 4 years. Entry requirements: 2 'A' level G.C.E. passes. Candidates may qualify for entry either by satisfying the General Requirement of the University or by offering G.C.E. in English Language plus 4 other subjects of which 3 must have been passed at the same time, 2 of these 3 at 'A' level. The university also conducts a special Entrance Examination in Fine Art which all candidates are normally required to pass.

University of Nottingham. B.A. Fine Art or Art History: 4 years. Entry requirements: 2 'A' level G.C.E. passes.

University of Reading. B.A. Fine Art: 4 years. Entry requirements: 2 'A' level G.C.E. passes. (The final allocation of a student to a course at Reading is not made until after the first University Examination in Arts at the end of the first year.)

(ii) QUALIFICATIONS AWARDED BY THE ROYAL COLLEGE OF ART AND THE ROYAL ACADEMY SCHOOLS

These three establishments specialise in advanced post-diploma work. A very high standard of artistic ability is necessary for admission to the courses and students are expected to have had at least one or two years' specialised art education before acceptance. Most applicants have already obtained the National Diploma in Design or, in future, the Diploma in Art and Design. Except the Slade Certificate of Proficiency, all the awards made by or gained at these establishments carry automatic qualified teacher status and are of degree level.

The Royal College of Art, Kensington Gore, London, S.W.7, awards two Diplomas: **Associate of the Royal College of Art (Fine Art) (A.R.C.A.)** and **Designer Royal College of Art (Des.R.C.A.).** The A.R.C.A. is awarded to students in the Faculty of Fine Arts. The Des.R.C.A. is awarded to students in the Faculty of Graphic Design and Interior Design and in the Faculty of Industrial Design. The Des.R.C.A. is awarded only after students have satisfactorily completed nine months in a suitable post in industry as well as the College course.

The normal diploma courses last three years, except in the School of Sculpture, which is part of the Faculty of Fine Arts, and in the

School of Industrial Design (Engineering), part of the Faculty of Industrial Design, where some students take four-year courses.

Studies may be undertaken in the following schools:

Faculty of Fine Arts

School of Painting; School of Sculpture; Department of Stained Glass.

Faculty of Graphic Design and Interior Design

School of Graphic Design; Department of Print Making; Department of Television and Film Design; School of Interior Design.

Faculty of Industrial Design

School of Furniture Design; School of Industrial Design (Engineering); School of Ceramics; School of Textile Design; School of Silversmithing and Jewellery; Department of Industrial Glass; School of Fashion Design.

The regulations require candidates normally to have obtained five G.C.E. 'O' level passes or the equivalent in terms of 'O' and 'A' levels; but in recent years only about half of the entrants have had these qualifications.

Non-Diploma Courses. Exceptionally highly qualified students who wish to study a particular subject may be admitted to non-diploma courses at the Principal's discretion. One-year courses leading to a Certificate are open to a limited number of Commonwealth students. There are short courses in the Faculty of Industrial Design for students working in industry as designers, and in the School of Graphic Design for a limited number of people working in commercial studios. This School also offers a short course in Bookbinding for craftsmen and craft-teachers.

The Royal Academy Schools, Burlington House, London, W.1, award the **Royal Academy Schools Certificate (Cert. R.A.S.).** Three-year course in painting, sculpture or architecture. Students who have not already obtained the N.D.D. or equivalent qualifications are required to take a four-year course.

Candidates for the School of Painting must be under 22 years of age, and for the School of Sculpture under 25 years of age. Entry is by competitive examination and the first three months of the course are regarded as a probationary period.

At the time of writing the School of Architecture is being re-organised and details of entrance requirements are not available.

(iii) UNIVERSITY DIPLOMAS AND CERTIFICATES IN FINE ART

University of Edinburgh. Diploma in the History of Art: this is a one-year course open to graduates and diplomates of Colleges of Art.

University of London Diploma in Fine Art. Four-year course at the Slade School of Fine Art, University College.

Entry requirements for the course are five 'O' level G.C.E. passes or three 'O' level passes and one other 'A' level pass. Selection is by examination of candidate's work and by interview.

The Diploma may be taken in Drawing and Painting and one subsidiary subject or in Drawing and Sculpture and one subsidiary subject.

The Diploma entitles students to be classed as qualified teachers. A further year's course at an Institute of Education qualifies for the Department of Education and Science's Art Teacher's Certificate and thereby obtains full graduate teaching status.

Slade Certificates of Proficiency. These may be granted to any student who has made satisfactory progress over a period of not less than three terms' full-time study at the Slade School, and who, on leaving, has not obtained the University of London Diploma in Fine Art.

University of London. Diploma in the History of Art: 4-year comprehensive part-time course at Evening Institutes.

University of London. Diploma in the Visual Arts: 4-year course at Evening Institutes. The first three years are devoted to a general study of architecture, sculpture and the applied Arts and painting. Fourth year students take one of the courses approved for the Diploma in the History of Art of the University.

University of London. Academic Diploma in the History of European Art: this is taken after a 2-year postgraduate course.

University of London, Courtauld Institute. Certificate in the History of Art: this certificate is awarded on the results of an examination based on lectures which are open to the public.

University of Newcastle. Certificate in Fine Art: part-time 2- to 3-year course.

University of Oxford. Diploma in the History of Art: this Diploma can be taken only by members of the university. A one-year course of study is necessary.

University of Oxford. Certificate in Fine Art: this is open to non-graduates and is normally taken after a 4-year part-time course of study.

University of Reading. Diploma in Fine Art: now discontinued, a 3-year non-graduate course.

NATIONAL DIPLOMA AND DIPLOMA OF THE NATIONAL COUNCIL FOR DIPLOMAS IN ART AND DESIGN

The National Diploma in Design (N.D.D.). This Diploma and its preliminary, **Intermediate Certificate in Arts and Crafts**, will be awarded by the Department of Education and Science until 1966.

The Intermediate Certificate in Arts and Crafts was taken by candidates of at least 18 years of age after a suitable course of study.

The National Diploma in Design was taken by candidates of at least 19 years of age, normally those who had completed a two-year course after obtaining the Intermediate Certificate in Arts and Crafts. Candidates were required to make the whole or part of an article designed during the examination and also to submit, as evidence of study, an essay on the history and methods of the branch of art in which they had specialised. Choice of the main subject for study could be made from a wide range of arts and crafts.

The Diploma in Art and Design (Dip.A.D.). This Diploma, awarded by the National Council for Diplomas in Art and Design, will supersede the National Diploma in Design and the Intermediate Certificate in Arts and Crafts in 1966. Its standard is substantially higher than the old National Diploma in Design. In England and Wales courses leading to this new qualification (Dip.A.D.) are provided by art schools, whose facilities have been approved by the Council. These courses are full-time, last three years and their standard approximates to that of a first degree. Candidates for admission to courses must be 18 or over by 1st October in the year of entry; they are normally required to have completed successfully a one- or two-year pre-Diploma course at a school of art and to have obtained five G.C.E. passes at 'O' level (or 'O' and 'A' level).

A Diploma in Art and Design may be awarded in one of the following areas of study:

Fine Art; Graphic Design; Three-Dimensional Design (including Ceramics, Furniture, Glass, Interior Design, Product Design, Silversmithing and other metalwork); Textiles/Fashion.

In all courses, however, some time is devoted to Art History and this subject is included in the final examination.

The Diploma will give automatic qualified teacher status to holders, although it is advisable for them to take a one-year post-Diploma teacher training course if they wish to teach.

Colleges offering Dip.A.D. Courses. All courses are three years full-time:

- Bath Academy of Art. 1, 2, 3, 7.
 Birmingham College of Art and Craft. 1, 2, 3, 4, 5, 6, 12, 14.
 Brighton College of Arts and Crafts. 1, 3, 8.
 Camberwell School of Arts and Crafts. 1, 3, 7, 12.
 Canterbury College of Art. 3.
 Cardiff College of Art. 1, 2.
 Central School of Arts and Crafts. 1, 2, 3, 5, 6, 7, 12.
 Chelsea School of Art. 1, 2, 3.
 Coventry College of Art. 1, 3.
 Exeter College of Art. 1, 2.
 Falmouth School of Art. 1.
 Farnham School of Art. 7, 13.
 Gloucestershire College of Art. 1, 2, 14.
 Goldsmiths' College, School of Art. 1, 2, 15.
 High Wycombe College of Technology and Art. 4, 6, 13.
 Hornsey College of Art. 1, 2, 3, 4, 6, 7, 12, 14.
 Kingston School of Art. 1, 2, 3, 6, 8, 14.
 Kingston-upon-Hull Regional College of Arts and Crafts. 1.
 Leeds College of Art. 1, 2, 3, 5, 6, 8.
 Leicester College of Art. 1, 2, 3, 4, 5, 6, 7, 8, 12, 14.
 Liverpool College of Art. 1, 2, 3.
 London College of Printing, 3.
 Loughborough College of Art. 1, 2, 4, 6, 7, 12, 15.
 Maidstone College of Art. 1, 2, 3.
 Manchester Regional College of Art. 1, 2, 3, 5, 8, 9, 12, 14, 15.
 Newcastle College of Art and Industrial Design. 3, 5, 6.
 Newport College of Art. 1, 2, 3.
 Norwich College of Art. 1, 3.
 Nottingham College of Art. 1, 2, 14.
 Portsmouth College of Art. 1, 2.
 Ravensbourne College of Art and Building. 1, 2, 3, 6, 14.
 St. Martin's School of Art. 1, 2, 3, 14.
 Sheffield College of Art. 1, 2, 4.
 Stoke-on-Trent College of Art. 3, 7.
 Stourbridge College of Art. 11.
 Sunderland College of Art. 1, 2.
 West of England College of Art. 1, 2, 3, 6, 7.
 Wimbledon School of Art. 10.
 Winchester School of Art. 12.
 Wolverhampton College of Art. 2, 3, 7.

- | | |
|-----------------------------|--------------------------------|
| 1. Painting | 8. Crafts |
| 2. Sculpture | 9. Theatre |
| 3. Silversmithing | 9a. Glass |
| 4. Industrial Design (Eng.) | 10. Woven and Printed Textiles |
| 5. Furniture | 10a. Woven Textiles |
| 6. Ceramics | 11. Fashion |
| 7. Interior Design | 12. Embroidery |

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CITY AND GUILDS OF LONDON INSTITUTE CERTIFICATES

Many Art Schools and Technical Colleges offer one-, two- and three-year courses, full- and part-time, geared to the requirements of

particular industries, for craftsmen and women and for assistants to creative designers. These courses lead to the Certificates of the City and Guilds of London Institute and to college certificates.

In the session 1965-66 the City and Guilds of London Institute offers examination in only one art subject, Technical Illustration (No. 228) (Intermediate and Final). (City and Guilds qualifications in specific crafts are covered in the relevant sections.)

Many colleges also award their own certificates for students taking these less academic courses.

CERTIFICATES OF THE REGIONAL EXAMINING UNIONS

(i) EAST MIDLAND EDUCATIONAL UNION

Certificate in Shop Window Display. The Union awards this Certificate to candidates who pass an examination in Theory and a practical test. The Theory examination consists of a written paper on General Display, Colour and Lettering; the Practical test is judged on a photograph of a display set up by the candidate, accompanied by a coloured sketch or diagram showing the colour scheme.

Certificate in Lettering.

(ii) NORTHERN COUNTIES TECHNICAL EXAMINATIONS COUNCIL

Certificate in Commercial Design. The Council offers a three-year part-time certificate course, planned to provide a basic training for intending commercial designers. At the end of the first- and second-year stages, the Council awards Records of Success to candidates who pass in one or more subjects. The Certificate is awarded to candidates who are not less than 17 and who pass in both lettering, layout or Typographic Design and Design and Reproduction at the end of the third year.

Certificate in Advanced Commercial Design. Candidates for the Certificate should normally have obtained the Certificate in Commercial Design or have reached an equivalent standard. Certificates, for which two years' study is usually necessary, are awarded to candidates who pass in both Theory and Design. Candidates who pass in one subject are awarded a Record of Success.

Certificate in Display. The Council offers a three-year part-time course, intended to provide a basic training for employees or intending employees in retail trade display. Candidates must submit certificates of proficiency in practical work at the end of the first and second years, and they must be not less than 17 at the time

of taking the third year examinations in Theory, Design and Practical Display. A Certificate in Display is awarded to candidates who pass in each examination.

Certificate in Advanced Display. Candidates should have obtained the Certificate in Display or have reached an equivalent standard. Some students may need two years' study before taking the examination, which consists of Theory, Design and Practical Display.

(iii) UNION OF EDUCATIONAL INSTITUTIONS

Certificate in Commercial Design. A Certificate is awarded to candidates who have followed an Advanced course and have passed examinations in Original Design and History and Methods of Production; candidates must also present a Testimony of Study.

Introductory Art Course Certificate.

General Art Course Certificate.

Advanced Art Course Certificate. This is intended for students who have reached the stage of specialisation in one or more crafts.

(iv) UNION OF LANCASHIRE AND CHESHIRE INSTITUTES

Certificate in Advertising and Display. The Union offers a two-year full-time course for students not less than 16 intending to become assistant designers in the printing industry and in graphic and display studios. After a common first-year course students may specialise to some extent in advertising or display. The second-year examinations consist of Drawing and Pictorial Composition, Drawing and Design, Advertising Techniques or Display Techniques.

Certificate in General Design.

Certificate in Advertising Design.

OTHER QUALIFICATIONS

Diploma of the British Display Society (Queen's House, Leicester Square, London, W.C.2). This Diploma is taken after a part-time course by persons engaged in display and studio work. Entrance to courses for Part A of the Diploma is normally by examination. The examinations are in three parts—A, B and C. The syllabus for Part A covers Display Theory and Studio Practice; Part B, Display Design and Application and Studio Practice; and Part C, Policy and Administration and Studio Practice.

College Certificate in Display of the College for the Distributive Trades. The two-year full-time course leading to

this certificate is suitable for anyone wishing to make a career in Display. Applicants must be at least 16 years old and may take an entrance examination held in May or June each year.

The course covers window, interior and exhibition display, as well as principles of retail distribution, textiles, English and Social Studies. A period is spent in the display department of a store.

During the course students take an examination which exempts them from Part A of the British Display Society's Diploma (*see above*), and the College Certificate, taken at the end of the course, gives exemption from Part B of the Diploma under certain conditions.

SCOTLAND

(i) POST-DIPLOMA COURSES

Dundee College of Art. Courses are offered in Drawing and Painting, Design and Crafts, Sculpture, Silversmithing and Jewellery.

Glasgow School of Art. A post-diploma course in Art is offered.

(ii) COLLEGE DIPLOMA COURSES

Four Central Art Institutes—Grey's School of Art, Robert Gordon's Technical College, Aberdeen; Dundee College of Art; Edinburgh College of Art and Glasgow School of Art—award their own **diplomas** to students who successfully complete a four-year course. Entry has been by college examination, but from 1965 the normal minimum requirement for these courses will be four passes in the S.C.E. of which one must be in English and at least two on the Higher Grade.

The course may be taken in Design and Crafts, Drawing and Painting or Sculpture.

These diplomas are accepted by the Scottish Education Department as a technical qualification of graduate status for the teaching of Art, provided that the holder has an acceptable standard of general education and completes a six-month course of professional training.

(iii) COLLEGE CERTIFICATE COURSE

Dundee College of Art runs a full-time course in illustration for a College Certificate. This qualification is of a lower level than the Diploma.

NORTHERN IRELAND

Diploma of the Belfast College of Art. This is taken after a three-year full-time course at the College. Candidates must be at least 18 years old and must have spent one or two years in the pre-diploma classes of the College.

Normal entry requirements for a diploma course are G.C.E. passes, including English and at least three academic subjects, in either (a) five subjects at 'O' level *or* (b) three subjects at 'O' level and one other subject at 'A' level *or* (c) two subjects at 'O' level and two other subjects at 'A' level *or* (d) three subjects at 'A' level and evidence that other subjects have been studied since the age of 16.

The College has the following schools:

Architecture (see relevant section); Fine Art (Drawing, Painting, Modelling and Sculpture); Textiles and Fashion; Three-Dimensional Studies (Ceramics, Silversmithing, Metalwork and Jewellery); Printing and Graphic Design (Publicity Design, Illustration and Book Production); Painting, Decorating and Interior Design; Teacher Training (see relevant section).

ASTRONOMY

Royal Astronomical Society

Burlington House, London, W.1

The Society conducts no examination and **Fellowship** of the Society (**F.R.A.S.**) implies no kind of professional qualification.

The British Astronomical Association

303, Bath Road, Hounslow West, Middlesex

This is an amateur society.

UNIVERSITY DEGREES AND DIPLOMAS

(i) FIRST DEGREES

Honours degree courses are offered at the following universities. The number of 'A' level passes required (in science and mathematics) is shown with each entry. For details of higher and other degrees see entries under individual universities in Part 4.

Edinburgh. B.Sc. in Astrophysics: 4 years. 3 'A' level passes including Physics and Applied Mathematics.

Glasgow. B.Sc.: 4 years. 3 'A' level passes including Pure and Applied Mathematics; Physics also preferred.

London (University College). B.Sc.: 3 years. 3 'A' level passes including Physics.

St. Andrews. B.Sc.: 4 years. 2 'A' level passes including Physics.

Note: Astronomy may also be taken as a principal subject in Combined Honours courses for B.Sc. or M.A. at Glasgow and St. Andrews.

(ii) DIPLOMA

University of Manchester: Postgraduate Diploma in Astronomy. 1 year.

AUCTIONEERING AND ESTATE AGENCY

The Chartered Auctioneers' and Estate Agents' Institute
29, Lincoln's Inn Fields, London, W.C.2

Auctioneers and estate agents sell, let, manage and value real estate. There are several ways of entering the profession:

- (a) by serving a period of articles, usually for three years;
- (b) by taking a post in an office as a trainee or junior assistant.

In these two cases practical experience must be supplemented by theoretical study.

- (c) Candidates may be exempted from the Institute's examinations if they hold certain university degrees;
- (d) candidates may undertake a full-time course of study for a diploma approved by the Institute for whole or partial exemption from its examinations;
- (e) candidates may undertake a full-time course of study leading to the Institute's examinations at an establishment approved by the Institute.

In these three cases theoretical study must be supplemented by practical experience in an approved office.

Fellow (F.A.I.). Candidates must be at least 30, have passed both the Intermediate and Final Examinations or the Direct Final

Examination or another approved examination, have obtained a practical knowledge of the profession and have been in practice as Principals and/or Assistants for not less than five years; *or* have been Associates for not less than 10 years and have passed the Intermediate Examination under earlier regulations.

Associate (A.A.I.). Candidates must be at least 21, have passed both the Intermediate and Final Examinations or the Direct Final Examination or another approved examination; and have *either* served in an approved office as an articled pupil for not less than three years or have served either as an assistant or in another professional capacity approved by the Institute or have occupied another approved professional position for not less than five years; *or* have gained a practical knowledge of the profession and for the three years immediately before their application been in practice as Principals.

Licentiates must have passed the Intermediate Examination or another approved examination and occupy a post in the profession approved by the Institute.

Students must be at least 16 and have passed or been exempted from the Preliminary Examination; they must be serving as articled pupils or assistants in approved offices or be following a course of instruction approved by the Institute.

HONORARY MEMBERSHIP

The Institute may elect Honorary Fellows and Honorary Members.

PROFESSIONAL EXAMINATIONS

The examinations conducted by the Institute are **The First Examination; The Intermediate Examination** (which qualifies for Licentiatehip); and **The Final or the Direct Final Examination** (which qualify for Associateship or Fellowship, according to the age and status of the candidate).

A course of studies for these examinations normally extends over three years.

The Preliminary Examination, which is a qualification for Studentship, is for candidates whose academic qualifications do not meet the minimum educational requirements of the Institute.

EXEMPTIONS FROM THE PROFESSIONAL EXAMINATIONS

Preliminary Examination. Candidates who have one of the following or whose qualifications are regarded as equivalent to the Institute's minimum educational requirements may be exempted from the Preliminary Examination:

- (a) Any British or Irish degree.
- (b) Any British or Irish university matriculation examination.
- (c) The School Certificate or Higher School Certificate.
- (d) The G.C.E., the S.L.C., the S.C.E. and the Northern Ireland Senior Certificate (all under prescribed conditions).
- (e) The preliminary examinations of various Institutions, Forces Preliminary Examination, certain College of Preceptors certificates.

The First Examination. Candidates who have an approved degree, passed Part I of the London B.Sc. in Estate Management and, on certain conditions, passed Part I of the Diploma in Rural Estate Management of the Royal Agricultural College, Cirencester, may be exempted from the First Examination.

The Final Examination. Candidates who hold the Cambridge B.A. with a Certificate of Proficiency in Estate Management, or the London B.Sc.(Estate Management) or have passed the Final Examinations of both the Royal Institution of Chartered Surveyors (Agriculture and Land Agency Section) and the Chartered Land Agents' Society may be exempted from the Final Examination.

The Direct Final Examination. Whole or partial exemption in the appropriate section is granted to candidates who have certain university degrees and diplomas.

COURSES OF INSTRUCTION

A four-year full-time course for the Final Examination is offered at Bristol Technical College.

The Incorporated Society of Auctioneers and Landed Property Agents

(incorporated 1924)

34, Queen's Gate, London, S.W.7

Student. Candidates must be at least 16, have reached an approved educational standard, be serving or intending to serve in an approved office or be following an approved course of study and be sponsored by their employers or some other responsible persons.

Licentiatees must be at least 17, have an approved position or appointment in the profession and have passed the Intermediate Examination or an approved alternative examination.

Associate (A.A.L.P.A.). Associates must be at least 21, hold an approved position or appointment in the profession and have

passed the Final or Direct Final Examination or an approved alternative examination. They must also have gained a practical knowledge of the profession and have been in professional practice for not less than three years as Principals and/or Managers, Assistants or Articled Clerks or in some other approved professional post.

Fellow (F.A.L.P.A.). Fellows must be at least 30, hold an approved position or appointment in the profession and have passed the Final or Direct Final Examination or an approved alternative examination. They must also have gained a practical knowledge of the profession and have been in professional practice for not less than five years as Principals and/or Managers or in some other approved professional post.

PROFESSIONAL EXAMINATIONS

The Society conducts examinations in four Divisions: General Practice; Agricultural Practice; Chattels; Housing and Estate Management.

There are three examinations: **The Common Intermediate and Final Examinations; or The Direct Final Examination.**

Candidates must take either the Common Intermediate Examination, followed by the Final Examination in the appropriate Division, or, on certain conditions, the Direct Final Examination.

EXEMPTIONS FROM THE PROFESSIONAL EXAMINATIONS

Candidates who hold the London B.Sc. in Estate Management are exempted from the Common Intermediate and Final Examinations of the Society.

COURSES OF INSTRUCTION

Correspondence courses are provided by the following:

Bennett College Ltd., Sheffield.

J. Otway Cave, 10, Wood Vale, London, N.10.

Chambers College Ltd., 148, Holborn, London, E.C.1.

Edgar Simmons, 16, North Road, Stevenage, Herts.

College of Estate Management, St. Alban's Grove, Kensington, London, W.8.

Courses in Colleges of Further Education are provided in the following Colleges:

West London College of Commerce: Common Intermediate and Final (General Practice and Housing and Estate Management Divisions).

- Chiswick Polytechnic: Common Intermediate and Final (General Practice Division).
- Willesden Technical College: Common Intermediate.
- Birmingham College of Commerce: Final (General Practice Division).
- Bournemouth Municipal College of Technology and Commerce: Common Intermediate and Final (General Practice Division).
- Bradford Technical College: Certain subjects in the Common Intermediate. Classes for the Final can be arranged if there is sufficient demand.
- Bristol College of Commerce, Bristol Technical College: Certain subjects in the Common Intermediate and Final (General Practice and Housing and Estate Management Divisions).
- Brooklyn Technical College: Common Intermediate.
- Chichester College of Further Education: Common Intermediate.
- Cornwall Technical College: Common Intermediate.
- Erith Technical College: Common Intermediate and Final (General Practice and Housing and Estate Management Divisions).
- Ewell County Technical College: Common Intermediate and Final (General Practice Division).
- Exeter Technical College: Common Intermediate.
- Guildford County Technical College: Common Intermediate.
- Leicester College of Art: Common Intermediate and certain subjects in the Final (General Practice Division).
- Leeds College of Commerce: Common Intermediate. Classes for the Final can be arranged if there is sufficient demand.
- Liverpool College of Commerce: Common Intermediate and Final (General Practice Division).
- Maidstone Technical College: Common Intermediate.
- Manchester College of Commerce: Common Intermediate and Final (General Practice Division).
- Salford Technical College: Common Intermediate.
- Southampton College of Technology: Common Intermediate.
- South-East Essex Technical College: Common Intermediate and certain subjects in the Final (General Practice and Housing and Estate Management Divisions).
- Southend Municipal College: Most subjects in the Common Intermediate.

- Welsh College of Advanced Technology: Final (General Practice Division).
 West Kent College of Further Education: Common Intermediate.
 Worthing College of Further Education: Common Intermediate.

The Chartered Land Agents' Society

21, Lincoln's Inn Fields, London, W.C.2

Basic training in land agency, which normally lasts four years, may be undertaken by:

- (a) working under the supervision of a land agent who is a Fellow or Qualified Associate of the Society or who is eligible to be a Fellow or Qualified Associate of the Society.
- (b) So working after taking a course at one of the following establishments:

University of Cambridge (Land Economy Tripos).

University of London (B.Sc.(Estate Management) with optional rural subjects).

College of Estate Management (Diploma in Estate Management). (After 1967 the College will cease to prepare students for the Society's professional examinations.)

Royal Agricultural College, Cirencester (course in Estate Management).

Students are members engaged in study for the Society's written examinations or their accepted equivalent.

Associates are those members who have passed the Part III written examination or its equivalent.

Qualified Associate (Q.A.L.A.S.). Qualified Associates are those members who have passed all the examinations and have had at least two years' practical experience in the profession otherwise than as a pupil. A Qualified Associate may use the designation 'Chartered Land Agent (Q.A.)'.

Fellow (F.L.A.S.). Fellows have reached a specified degree of experience and responsibility and may use the designation 'Chartered Land Agent'.

PROFESSIONAL EXAMINATIONS

There are **three professional examinations**: Part I, Part II and Part III Written and Practical. There is also a **Direct Fellowship Examination**, which is open to senior candidates of at least

40 who are qualified for election to Fellowship except that they have not passed the examinations.

EXEMPTIONS

Exemptions are granted from the different Parts to the following:

Part I. A candidate who has obtained a university degree approved by the Council, or passed the First Examination of the Royal Institution of Chartered Surveyors, or the Part I Examination for the Diploma in Rural Estate Management of the Royal Agricultural College, Cirencester, or a candidate who, except that he has not passed the examinations, is qualified for election as a Fellow of the Society.

Candidates from the Navy, Army and Air Force who have held permanent appointments, and candidates from other professions, will receive special consideration and each case will be treated on its merits.

Part II. A candidate who has obtained a university degree in Rural Estate Management approved by the Council, or the Land Economy Tripos at Cambridge University, or who holds the Cambridge University B.A. degree and passed the university's first examination in Agriculture, Estate Management and Forestry, and the second and third examinations in Estate Management before 1931, or who holds the Cambridge University B.A. degree and passed the university's first examination in Agriculture, Estate Management and Forestry, and the second and third examinations in Estate Management between 1931 and 1937.

A candidate who has passed the Intermediate Examination of the Royal Institution of Chartered Surveyors in the Agriculture and Land Agency Section, or who has been awarded the Diploma in Rural Estate Management of the Royal Agricultural College, Cirencester, in 1962 or subsequent years and has attained certain specified standards.

Part III. Cambridge University graduates in Estate Management, Rural Estate Management, or holders of the Land Economy Tripos are exempted either the written or practical Part III examinations or both.

London University graduates in Estate Management may be exempted from either the Part III written or both the Part II written and practical examinations.

OTHER COURSES IN ESTATE MANAGEMENT

The College of Estate Management (founded 1919; incorporated 1922), St. Alban's Grove, London, W.8 (Secretary: P. N. Brook), is an Institution with Recognised Teachers of London University and is associated with the Royal Institution of Chartered Surveyors, the Chartered Auctioneers' and Estate Agents' Institute and the Chartered Land Agents' Society. It offers the following full-time, evening and postal courses.

B.Sc.(Est.Man.). The degree was established as an external degree by the University of London in 1918; in 1938 it became an internal degree and since 1939 the College has been the recognised Institution teaching for the degree. The B.Sc.(Est.Man.) is a pass degree and is classified in three Divisions. Prospective students must have five G.C.E. passes, of which two must be at 'A' level, or four G.C.E. passes, of which three must be at 'A' level. The course, which lasts three years, covers the Law relating to Estate Management, Principles of Economics, Land Economics, Valuation of Land and Buildings, Applied Town and Country Planning or Agriculture and Forestry, and Construction of Buildings.

College Diploma in Estate Management: 3 years full-time. Students must have four G.C.E. passes, of which three must be at 'A' level, or five G.C.E. passes, of which two must be at 'A' level, or a comparable qualification.

College Diploma in Quantity Surveying: 3 years full-time. Students must have four G.C.E. passes, of which three must be at 'A' level, or five G.C.E. passes, of which two must be at 'A' level, or a comparable qualification.

Royal Institution of Chartered Surveyors (*see page 996*). The following courses are available:

General Section. First, Intermediate and Final Examinations.

Agriculture and Land Agency Section. First, Intermediate and Final Part I Examinations.

Quantity Surveying Section. Intermediate, Final Parts I and II, Direct Membership Examinations.

Valuation, Housing Management, Building Surveying and Town and Country Planning Sections. Final Examination (last examination held in 1966).

Mining Surveying Section. Intermediate and Final Examinations.

Land Surveying Section. Intermediate and Final Examinations.

R.I.C.S. Housing Manager's Certificate.

R.I.C.S. Diplomas in Rating and Forestry.

Chartered Auctioneers' and Estate Agents' Institute (*see page 451*). The following courses are available in the Urban, Rural and Chattels Sections:

First, Intermediate, Final and Direct Final Examinations.

Chartered Land Agents' Society. Courses are available for the Parts I, II and III examinations.

Incorporated Society of Auctioneers and Landed Property Agents (*see page 453*). Courses are available for the Common Intermediate, Final and Direct Final Examinations.

Housing Management Examination Board (*see page 745*). The Board was established by the Institute of Housing and the Society of Housing Managers (which merged in April 1965 to form the Institute of Housing Managers) in January 1962. The Diploma Examination (Intermediate and Final) has replaced the Institute of Housing's examination and the Housing Manager's Certificate of the R.I.C.S. The College provides only postal courses.

Institution of Municipal Engineers (*see page 694*). Postal courses are available for the following courses:

The Professional Examinations of the Institution.

Building Inspector's Certificate.

Diploma in Town Planning.

Town Planning Institute (*see page 433*). Postal courses are available for the following examinations:

Intermediate Examination Parts I and II.

Final Examination Parts I, II and III.

Legal Associateship Examination.

Royal Society of Health (*see page 734*). A postal course is available for the Diploma in Health Engineering, which is open to candidates not less than 19.

AUDIOLOGY TECHNICIANS

The work of audiology technicians includes testing hearing, under the supervision of medical staff, and the provision, and minor servicing, of hearing aids. These two functions, Audiometry and Audiotechnology, were formerly separate occupations. Most audiology technicians are women.

Society of Audiology Technicians

38, Loxley Road, Wandsworth Common, London, S.W.18

Training leads to examinations for Membership of the Society and also to registration with the Board of Medical Auxiliaries.

Candidates may be admitted to training between the ages of 18 and 40; they must have had a good general education and should preferably have G.C.E. 'O' level passes in three subjects, including Biology and Physics.

The Membership Examination is in two Parts, I and II. Part I may be taken after a three-month full-time course of theoretical training and Part II after nine months' practical training at a recognised hearing-aid distribution centre.

Three-month full-time courses are available at the Institute of Laryngology and Otology (330, Gray's Inn Road, London, W.C.1) and The Hearing Aid Clinic (8, Woodside Crescent, Glasgow, 3).

AVIATION

FLYING INSTRUCTORS

The Guild of Air Pilots and Navigators

14, South Street, London, W.1

The main objects of the Guild are to raise the standard of knowledge and skill of air pilots and navigators, to assist members of the profession and to promote honourable practice in it.

The Minister of Aviation delegates to the Guild's Panel of Examiners complete authority to examine pilots for competence to instruct in flying under the provisions of the Air Navigation Order.

There are two classes of Freemen of the Guild:

Upper Freemen are professional civilian pilots or flight navigators, or test pilots who are recognised by the Guild.

Freemen are pilots, qualified pilots or navigators in the armed forces or persons who have contributed or are likely to contribute to the advancement of the profession.

FLYING INSTRUCTORS' RATINGS

Assistant Flying Instructor's Rating. Candidates must hold a valid pilot's licence, have completed at least 150 hours as pilot in

command (30 of which must have been obtained on the class of aircraft to which the application relates), have completed not less than 5 hours on the type of aircraft to which the application relates, have completed not less than 10 hours' night flying and an approved flying instructor's course.

The rating qualifies the holder to give instruction under the direction of a fully rated flying instructor in single-engined aircraft not exceeding 12,500 lb. in weight and in multi-engined aircraft not exceeding 12,500 lb. in weight.

Flying Instructor's Rating. Candidates must hold a valid pilot's licence issued by the Ministry of Aviation or a civil licensing authority in the Commonwealth, have completed at least 400 hours as pilot in command (of which 30 must have been obtained on the class of aircraft to which the application relates), have completed at least 200 instructional hours and six months as assistant flying instructors, have done 10 hours' night flying and have taken an approved flying instructor's course.

The Rating Test consists of an oral examination and a flying test (including for flying instructors spinning and aerobatics if the application relates to single-engined aircraft).

Master Air Pilot and Master Air Navigator Certificates. Since the discontinuance of the Master Pilot's Licence the Guild issues, with the approval of the Ministry of Aviation, a Master Air Pilot or Master Air Navigator Certificate to anyone who is a British subject and has achieved the standards of experience and competence required to merit the distinction.

STUDENT PILOT'S AND PRIVATE PILOT'S LICENCES

The minimum age for the issue of either licence is 17; candidates are required to pass a medical examination. Applicants for a Student Pilot's Licence do not need air experience and are not required to pass a technical examination. Candidates for a Private Pilot's Licence must meet the Ministry's requirements as to flying experience, flying skill and technical knowledge; they may be examined by the Ministry, a Royal Aero Club Official Observer or a Chief Flying Instructor who is authorised to conduct examinations on behalf of the Ministry.

RATINGS

The Aircraft Rating is that part of the Private Pilot's Licence which stipulates which types of aircraft it entitles him to fly.

Private Pilots may fly aircraft in three groups, A, B and C, depending on size and use of the aircraft.

The Night Rating permits the pilot to carry passengers at night. Applicants for a night rating must have satisfactorily completed specified flying time and instruction.

The Instrument Rating permits the pilot to fly under instrument flight rules in control zones and control areas. Candidates for an instrument rating are required to pass a technical examination, and completed specified flying experience and tests.

The Instructor's Ratings. Pilots who wish to extend the privileges of their licences to entitle them to give flying instruction must obtain either an Assistant Instructor's or an Instructor's Rating.

Flying Test. Candidates for a Private Pilot's Licence containing either a Group A or a Group B rating are required to take a flying test in a representative type of aircraft; to obtain a Group C rating the test must be taken in the type of aircraft for which the rating is required.

During the test, which normally consists of an hour's flight at Stansted Airport, Essex, candidates are assessed on airmanship including circuit procedure, aerodrome discipline, the setting and use of the flight instruments fitted to the aircraft, pre-flight inspection, starting procedure and running up, cockpit check and vital actions.

Certain exemptions may be granted to qualified pilots in one of H.M. Air Forces and to holders of licences issued in other countries.

Technical Examinations. The subjects of the examination for the Private Pilot's Licence, which consists of written papers and oral tests, are as follows:

Aviation Law and Flight Rules and Procedures; Navigation and Meteorology; Airframes and Engines (General); Airframes and Engines (Specific Types) for ratings in Group C only; Seamanship if the licence includes a sea or amphibian class of aircraft.

Candidates must obtain 70% of the marks in each subject.

Certain exemptions may be granted to qualified pilots in one of H.M. Air Forces.

Private Pilot's Licence (Balloons). The Minister of Aviation may issue a Private Pilot's Licence (Balloons). The demand for such licences is limited and at present there is only one Balloon Licence holder. The Ministry of Aviation does not now publish regulations for the grant of a Balloon Licence, but treats each application on its merits.

PROFESSIONAL PILOTS' LICENCES

The Minister of Aviation grants licences to three classes of professional pilots in accordance with the Air Navigation Order, 1960. The three classes are **Commercial Pilots; Senior Commercial Pilots;** and **Airline Transport Pilots.** The licences, which may be granted with ratings, extending or limiting the holders' privileges, entitle persons to act as members of operating crews of aircraft registered in the United Kingdom.

The minimum age for the issue of a Commercial Pilot's licence is 18; for a Senior Commercial or Airline Transport Pilot's licence the minimum age is 21. Candidates for licences must pass a medical examination and meet the Ministry's requirements as to pilot experience, flying skill and technical knowledge.

(i) COMMERCIAL PILOTS' LICENCES

Candidates must satisfy the following requirements:

Flying Experience. Applicants must produce evidence that they have completed satisfactorily 200 hours as a pilot, including adequate flying training under a qualified instructor (with at least 10 hours' instruction in instrument flying), at least 100 hours as pilot in command and experience as pilot in command or co-pilot. Candidates who have successfully taken an approved course of training may have the total requirement of 200 hours' experience reduced to 150.

Flight Test. Applicants must pass General Flight Tests and a Type Rating Test. The General Flight Tests consist of a Day Flight Test and a Night Flight Test conducted at Stansted Airport, Essex. The Day Flight Test is in three sections — Cross-country Flying, Basic Aircraft Handling and Instrument Flying. The Night Flight Test requires the candidate to demonstrate his ability to take-off, land and do over-shoot procedure; the candidate is also assessed on his use of Radio-Telephone equipment.

The Technical Examination consists of written papers and oral and practical tests in the first nine of the following subjects (the pass standard required is shown in parentheses):

Aviation Law, Flight Rules and Procedures (3 papers) (70% in papers 1 and 2, Pass/Fail in paper 3); Flight Planning (70%); Navigation (General) (70%); Navigation (Plotting) (70%); Meteorology (70%); Radio Aids (70%); Signals (Practical Test) (Pass/Fail); Technical Examination — Aircraft (70% in each section); Performance (Pass/Fail); Radiotelephony (Pass/Fail); Seamanship (if the licence is to include a sea or amphibian class of flying machine) (Pass/Fail).

(ii) SENIOR COMMERCIAL PILOTS' LICENCES

Candidates must satisfy the following requirements:

Flying Experience. Applicants must produce evidence that they have completed satisfactorily 700 hours as a pilot, including not less than 200 hours as pilot in command, a reasonable amount of flying experience in the type of aircraft to which the application relates and at least 40 hours' flying on instruments alone (of which not more than 20 may be in an approved simulated flight trainer). The remainder of the 700 hours may be acquired as pilot in command or as co-pilot. Candidates who have passed an approved course of flying training may have the total requirement of 40 hours' instrument flight reduced to 30.

Flight Test. In addition to the requirements for a Commercial Pilot's Licence candidates for a Senior Commercial Pilot's Licence must pass an Instrument Rating Test. The test consists of flying tests and written papers and oral and practical tests in the following subjects:

Flight Rules and Procedures; Flight Planning; Navigation; Meteorology; Radiotelephony; Signals.

Candidates must pass in the last two of these subjects and obtain not less than 70% in each of the other subjects.

Technical Examinations. The examination for both the Senior Commercial and the Airline Transport Pilots' Licences consist of written papers with oral and practical tests. The subjects, with the required pass marks, are as follows:

Navigation (General) (65%); Navigation (Radio Aids) (65%); Navigation (Instruments) (65%); Navigation (Plotting) (80%); Navigation (Flight Planning) (80%); Meteorology (65%); Aviation Law, Flight Rules and Procedures (70%); Signals (Pass/Fail); Navigation and Instruments (Oral) (Pass/Fail); Radiotelephony (Pass/Fail); Seamanship (if the licence is to include a sea or amphibian class of aircraft) (70%); Airframes and Engines (General) (70% in each section); Airframes and Engines (Specific Type) (70% in each section); Performance (Pass/Fail).

(iii) AIRLINE TRANSPORT PILOTS' LICENCES

Candidates must satisfy the following requirements:

Flying Experience. Applicants must produce evidence that they have completed satisfactorily 1,200 hours as a pilot, including not less than 250 hours as pilot in command, the remainder as pilot in command or as co-pilot.

The Flight Test and Instrument Rating Test are as for the issue of a Senior Commercial Pilot's Licence.

The Technical Examinations are as for the issue of a Senior Commercial Pilot's Licence.

RATINGS

The Aircraft Rating is that part of the pilot's licence which stipulates which types of aircraft it entitles him to fly.

The Instrument Rating must be obtained by Commercial Pilots if they wish to command aircraft on a scheduled service or to act as pilot or co-pilot of aircraft flying in controlled airspace. The Instrument Rating is an integral part of the Senior Commercial and Airline Transport Pilots' Licences and, unless they already hold a valid United Kingdom Instrument Rating, candidates are required to pass an initial instrument rating flight test at the Ministry of Aviation Flying Unit, Stansted Airport, Essex.

Instructors' Ratings. Pilots who wish to extend their licence to entitle them to give flying instruction must obtain either an Assistant Instructor's Rating or an Instructor's Rating. Candidates who have sufficient experience are required to pass an oral examination and a flying test in respect of each class or type of aircraft on which they wish to give instruction.

Towing Rating. Pilots who wish to tow gliders must obtain a towing rating.

Renewal of Licences and Ratings. Licences must be renewed every five years. A renewal is granted on the basis of a medical examination and evidence that the applicant has had recent satisfactory flying experience. Pilots are required to have a medical examination every six months and to obtain a Medical Certificate.

TRAINING FOR COMMERCIAL PILOT'S LICENCE AND INSTRUMENT RATING

The following establishments offer courses of instruction approved by the Ministry of Aviation:

The College of Air Training (Hamble, Southampton, Hampshire); Airwork Services Training (Perth Aerodrome, Perth); Oxford Air Training School (Oxford Airport, Kindlington, Oxford); London School of Flying (Elstree Airport, Elstree, Hertfordshire).

All candidates for the Commercial Pilots' Licence Examinations are required to have taken a course of instruction at an approved establishment.

The entry requirements for the College of Air Training,

Hamble, are that candidates must be at least 18 and not more than 24 years of age and have at least two 'A' level and three other G.C.E. passes. Included in these must be Mathematics, English Language and one of Physics, Chemistry, Physics with Chemistry or General Science. Holders of the Scottish Leaving Certificate or S.C.E. must have three passes on the Higher Grade and two on the Lower Grade or four passes on the Higher Grade (English, Mathematics and a science subject included). Northern Ireland candidates should have equivalent qualifications.

The three other approved establishments, of which the largest is Airwork Services Training, Perth, are privately owned. A.S.T., Perth, has two sections, the School of Aviation and the School of Aeronautical Engineering; the course for the Commercial Pilot's Licence lasts at least nine months, with another two or three months for Instrument Rating.

Candidates for courses at the three private schools must have reached an educational standard equivalent to or at G.C.E. 'O' level in at least five subjects, including English, Mathematics and a science subject.

HELICOPTER PILOTS' LICENCES

The Minister of Aviation issues licences to Private, Commercial and Airline Transport Pilots.

(i) PRIVATE PILOT'S LICENCE (HELICOPTERS)

Applicants must be not less than 17 and satisfy certain requirements as to medical fitness, knowledge, experience and skill.

Candidates must pass an examination in the following subjects:
Aviation Law, Flight Rules and Procedures (written); Navigation and Meteorology (written); Rotorcraft (General) (oral); Airframes and Engines (Specific Type) (oral).

A written examination is conducted by the Air Registration Board in the third and fourth of these subjects when the applicant wishes to pilot a helicopter in excess of 12,500 lb.

Applicants must have completed 40 hours as pilot of a helicopter or 30 hours in the case of approved private pilots' (helicopter) courses. These 40- and 30-hour periods may be reduced to 35 and 25 hours respectively if the applicant holds a licence to fly aeroplanes or if the applicant does not hold a licence but has more than 40 hours' piloting experience on aeroplanes.

The approved experience must include 12 hours' dual instruction on helicopters and at least 10 hours as pilot in command of a helicopter.

Applicants must pass flying tests. They must have had at least 10 hours as pilot in command on the first type of helicopter to be endorsed on the licence and at least five hours as pilot in command on any subsequent type.

Night Rating. To obtain a night rating applicants must have had at least 50 hours as pilot of a helicopter, of which not less than 25 must be as pilot in command. They must have had at least five hours' instruction in instrument flying in an aircraft, at least five hours' flight by night in a helicopter and provide evidence of their competence to fly helicopters at night, certified by a qualified helicopter instructor.

When the licence is first granted, pilots may not fly helicopters out of sight of ground or water nor by sole reference to instruments.

(ii) COMMERCIAL PILOT'S LICENCE (HELICOPTERS)

Applicants must be not less than 18 and satisfy certain requirements as to medical fitness, knowledge, experience and skill.

Candidates must pass an examination in the following subjects:

Aviation Law, Flight Rules and Procedures; Flight Planning; Flight Navigation; Meteorology; Radiotelephony (Practical Communications); Signals; Rotorcraft (General); Airframes and Engines (Specific Type).

These examinations are set to the standards of the Commercial Pilot's Licence (Fixed Wing) examinations. The first six are conducted by the Ministry of Aviation and the last two by the Air Registration Board.

Applicants must have completed at least 200 hours as pilot in flying machines of which not less than 100 hours must be as pilot of a helicopter. Applicants who have successfully completed an approved course of training may have the total requirement of 200 hours reduced to 150 hours and the 100 hours reduced to 75 hours; applicants who hold a professional pilot's licence or who have the flying experience required to qualify for such a licence may have the 100-hour requirement reduced to 75 hours.

The total experience must include adequate flying training under a qualified helicopter flying instructor, at least 35 hours as pilot in command of a helicopter, at least 10 hours as pilot of a helicopter at night and at least 10 hours as pilot in command of a helicopter within the six months immediately preceding the date of issue of the licence.

A type of helicopter must be named in the licence, and the licence may include privileges of flight by night. When the licence is first granted, pilots may not fly helicopters out of sight of ground

or water nor by sole reference to instruments. The licence is valid for five years, subject to satisfactory medical examination every six months and the production of evidence that the applicant has had six hours as pilot in command or co-pilot on helicopters during the preceding six months.

(iii) AIRLINE TRANSPORT PILOT'S LICENCE (HELICOPTERS)

Applicants must be not less than 21 and satisfy certain requirements as to medical fitness, knowledge, experience and skill. The subjects of the examination are common with those for the Commercial Pilot's Licence (Helicopters).

Applicants must have completed at least 1,200 hours as pilot in flying machines, including adequate flying training under a qualified helicopter flying instructor, at least 400 hours as pilot in command of helicopters, at least 20 hours as pilot of a helicopter at night and at least 10 hours as pilot in command of a helicopter in the six months immediately preceding the date of issue of the licence. The licence is restricted to day flying only if the applicant has had insufficient experience in night flying and insufficient night instruction.

A type of helicopter must be named in the licence, and the limitations on the licence are the same as those for the Commercial Pilot's Licence (Helicopters). The licence is valid for five years, subject to the same requirements.

Licence holders are entitled to fly as pilot in command of any helicopter specified in the rating when the aircraft is engaged on a flight for the purposes of public transport or aerial work; they may not fly as pilot in command on a flight at night carrying passengers unless they have done five take-offs and landings as pilot in command at night within the preceding 90 days.

(iv) INSTRUCTOR'S RATINGS

Applicants for a **Flying Instructor (Helicopters) Rating** must hold a valid pilot's licence (helicopters) and have been for at least six months an assistant flying instructor (helicopters) or a qualified helicopter flying instructor in one of H.M. Air Forces. They must have had not less than 400 hours as pilot in command on flying machines, including not less than 200 hours on helicopters, of which at least 100 hours must be as a flying instructor on helicopters; this 100 hours may be reduced in the case of flying instructors (aeroplanes) who have considerable experience.

Applicants must also have had at least 30 hours' experience as pilot in command on the particular type of helicopter for which the

instructor rating is sought, have completed a helicopter flying instructor course, passed a flying instructor's test and have passed an oral examination. The courses and tests must be conducted by a helicopter flying instructor approved to give them.

Applicants for an **Assistant Flying Instructor (Helicopters) Rating** must hold a valid pilot's licence (helicopters) and must have had at least 150 hours as pilot in command on flying machines, including at least 100 hours on helicopters. They must have had at least 30 hours as pilot in command on the particular type of helicopter for which the assistant instructor rating is sought, have completed an approved helicopter flying instructor course, passed a flying instructor's test and an oral examination. The courses and tests must be conducted by a helicopter flying instructor approved for the purpose.

OTHER MINISTRY OF AVIATION LICENCES

FLIGHT NAVIGATOR'S LICENCE

The minimum age for the issue of a Flight Navigator's Licence is 21. Candidates for licences are required to pass a medical examination and meet the Ministry's requirements as to flying experience, flying skill and technical knowledge.

Licences must be renewed every year on the basis of a medical examination and satisfactory evidence of recent flying experience.

Flying Experience. Candidates must have had 200 hours' satisfactory flying in the capacity of navigator. Not less than 100 hours (including at least 50 hours by night) must have been on flights in which the candidate has navigated for distances of about 1,000 nautical miles or for periods of at least five hours without landing. The remainder may have been on flights in which the candidate has navigated en route for periods of at least two hours.

Candidates who hold a current United Kingdom professional pilot's licence may be accepted for examination if they can produce log book evidence of at least 500 hours' experience as pilot in command or as co-pilot of a public transport aircraft on flights of the type described above.

Flight Tests are arranged after candidates have passed the technical examinations (*see below*), have gained the required air experience and have had it approved by the Ministry of Aviation. The subjects of the test are:

(Pre-Flight) Meteorology; Flight Plan; Navigation Equipment.

(In-Flight) Use of Instruments; Use of Radio/Radar Equipment; Use of Sextant; Calculations; Record of Flight; Fuel State.

The Technical Examinations consist of written papers with oral and practical tests. The subjects, with the required pass marks, are as follows:

Aviation Law, Flight Rules and Procedures (70%); Navigation (General) (65%); Navigation (Plotting) (80%); Navigation (Radio Aids) (65%); Navigation (Instruments) (65%); Navigation (Flight Planning) (80%); Meteorology (65%); Signals (Practical Test) (Pass/Fail); Instruments (Oral) (Pass/Fail); Astro-navigation (Oral) (Pass/Fail).

Candidates must take all the subjects in one examination, except that Commercial Pilots need not take Aviation Law, Flight Rules and Procedures or Signals; Airline Transport Pilots (or Senior Commercial Pilots who obtained their licence after 1st April, 1959) are examined only in Navigation (General) and (Plotting) and Astro-navigation; and Senior Commercial Pilots who obtained their licence before 1st April, 1959, are examined in these three subjects and Navigation (Flight Planning) and Meteorology.

FLIGHT ENGINEERS' LICENCES

The minimum age for the issue of a Flight Engineer's Licence is 21. Candidates for licences must pass a medical examination and satisfy the requirements of general aeronautical experience, flight engineering experience and technical knowledge.

Licences must be renewed every year. Candidates for a licence must have had at least two years' general aeronautical engineering experience, including at least one year's practical experience in the maintenance of airframes and engines.

Flying Experience. Candidates must have completed in the six months preceding their application at least 50 hours' satisfactory practical experience in flight engineering duties in the type of aircraft to which their application relates. Not more than half may have been obtained in a flight simulator.

Certificate of Practical Ability. Candidates must have a Certificate of Practical Ability for each type of aircraft which they wish to have included in the aircraft rating on their licence. Certificates are signed by the pilots in command of aircraft in which the flight engineer has served. The pilot in command is required to certify that he has witnessed the candidate's ability to carry out flight engineering duties satisfactorily in the course of a test.

The test for the Certificate covers knowledge of ground handling of aircraft and a flight test, during which the candidate must show that he is competent in all normal and emergency procedures,

including Ground Handling, Take-off and In Flight and Emergencies.

Technical Knowledge. The subjects of the technical examination, which consists of written papers and oral tests, are Part I: Airframes and Engines (General) and Aviation Law; Part II: Airframes and Engines (Specific Type).

The two parts of the examination may be taken separately. Candidates who wish to extend their licence are required to take Part II for each additional type of aircraft which they wish to include in their aircraft rating.

Candidates must obtain at least 70% of the marks in each Part.

The examinations are conducted by the Air Registration Board.

Training. Most Flight Engineers start their training as apprentices at about 16 in a branch of aeronautical engineering with a firm of aircraft makers or a major airline. The flying experience is normally arranged by the candidate's employer.

FLIGHT RADIO OPERATORS' LICENCES

The Ministry of Aviation grants two types of licence to Flight Radio Operators, one relating to radiotelephony equipment only and the other to both radiotelegraphy and radiotelephony equipment. The two licences are **the Flight Radiotelephony Operator's Licence (Restricted) and (General)** and **the Flight Radiotelegraphy Operator's Licence.**

Candidates for the grant of a licence must pass a qualifying examination and meet other requirements as to experience.

The Ministry also grants Temporary Flight Radiotelegraphy Operators' Licences to enable applicants who have passed the qualifying examinations to obtain the flying experience required for the issue of substantive licences.

AIRCRAFT MAINTENANCE ENGINEERS' LICENCES

Aeroplanes registered in the United Kingdom, other than those used in experimental or test flights, must be certified as airworthy and maintained according to an approved schedule. All repairs, overhauls, modifications or replacements to aircraft registered in the United Kingdom must be certified as having been carried out in accordance with regulations.

The Air Registration Board (Brabazon House, High Street, Redhill, Surrey) grants licences in a number of categories covering different duties to Aircraft Maintenance Engineers who are at least 21, have appropriate experience and have passed an examination for the categories in which they wish to be licensed. Engineers are

usually licensed in several categories. Licences are valid for one year and are renewed on application, provided that the holders have been doing appropriate work during the previous two years or that they comply with the current requirements for the grant of a licence.

Licences are granted in the categories listed below. Information about the types of aircraft, engines, instruments, etc., to which the categories relate is contained in Air Registration Board Notice No. 10.

Category 'A'—Aeroplanes may be granted in respect of each of several types of aircraft. Engineers licensed in Category 'A' may issue certificates of maintenance in accordance with the maintenance schedules approved under the Air Navigation Order, 1960, certificates of compliance in respect of inspections, repairs, replacements and modifications and certificates of fitness for flight.

Category 'B'—Aircraft, including Rotorcraft may be granted in respect of each of several types of aircraft. Engineers licensed in Category 'B' may issue certificates of compliance in respect of inspections, overhauls, repairs, replacements and modifications approved under the Air Navigation Order, 1960.

Category 'C'—Engines may be granted in respect of each of several types of engine. Engineers licensed in Category 'C' may issue, in respect of engines, certificates of maintenance in accordance with the maintenance schedules approved under the Air Navigation Order, 1960, certificates of compliance in respect of inspections, repairs, replacements and modifications, and certificates of fitness of engines for flight.

Category 'D'—Engines may be granted in respect of the same types of engines as those in Category 'C'. Engineers licensed in Category 'D' may issue, in respect of engines, certificates of compliance for inspections, overhauls, repairs, replacements, and modifications approved under the Air Navigation Order, 1960.

Categories 'A' and 'C'—Rotorcraft (combined licences) may be granted in respect of several types of rotorcraft and their engine installations. In connection with inspections, modifications, repairs and replacements engineers licensed in Categories 'A' and 'C' are responsible for the condition, assembly and functioning of relevant parts of rotorcraft and for the issue of certificates of compliance.

Category 'X'—Compasses. Licences are granted for direct-reading magnetic compasses and for specific types of remote-reading compasses. Engineers licensed in Category 'X'—Compasses may issue certificates of compliance relating to inspections, modifications, repairs and replacements.

Category 'X'—Instruments. Licences are granted in respect of a number of types of aircraft. Engineers licensed in Category 'X'—Instruments may issue certificates of compliance relating to inspections, modifications, repairs and replacements.

Category 'X'—Electrical. Licences are granted in respect of a number of types of aircraft. Engineers licensed in Category 'X'—Electrical may issue certificates of compliance relating to inspections, modifications, repairs and replacements.

Category 'X'—Automatic Pilots. Licences are granted in respect of specific types of automatic pilots. Engineers licensed in Category 'X'—Automatic Pilots may issue certificates of compliance relating to inspections, modifications, repairs and replacements.

Multi-Category 'X'—Instruments, Automatic Pilots and Compasses. Licences are granted in respect of specific types of aircraft.

Students training to become Aircraft Maintenance Engineers normally aim at qualifying for licences in Categories 'A', 'C' and 'X' (Compasses), which may be regarded as the basic qualification.

Examinations. The requirements for the grant and extension of licences follow the same general pattern. Before qualifying for examination on a particular type of aeroplane, engine, etc., candidates must pass a written examination on the Air Navigation Order, 1960, and the Board's requirements and recommendations appropriate to engineers licensed in the category concerned and on basic aeronautical engineering. Candidates qualifying for a type examination must reach a satisfactory standard in written and/or oral examinations on subjects applicable to the type and they must have experience appropriate to the type.

Licence holders who wish to extend their licence to include another type must pass an examination in subjects applicable to the type and/or have appropriate experience.

AIRCRAFT RADIO MAINTENANCE ENGINEERS' LICENCES

Two classes of licences are issued: **the Aircraft Radio Maintenance Engineer's Licence, Category A (R)** and **the Aircraft Radio Maintenance Engineer's Licence, Category B (R)**.

The minimum age for the issue of a licence is 21 and candidates must satisfy the Ministry of Aviation as to their practical experience and technical knowledge. The maximum period of validity for either licence is one year.

Category A (R). The examination for the Aircraft Radio Maintenance Engineer's Licence, Cat. A (R) is in two parts:

Part 1: Section A: Radio Theory; Section B: Oral and Practical Tests.

Part 2 (Optional): Section A: Aircraft Radar and Pulsed Hyperbolic Techniques; Section B: Oral and Practical Tests.

Part 1 must be taken by all candidates. Successful candidates are issued with a Cat. A (R) licence valid for aircraft radio communications apparatus and auxiliary equipment, and radio navigational aids, but excluding radar aids and pulsed hyperbolic systems. Part 2 is an optional examination, but it must be taken by applicants who wish to extend the privileges of their licences to cover radar aids and pulsed hyperbolic systems.

Successful candidates are awarded a Certificate of Proficiency which they must produce when they apply for the grant of a licence. They must also have completed at least three years' approved practical experience in the servicing, maintenance, overhaul or repair of radio apparatus, including at least one year on the maintenance of aircraft radio stations of the category to which the relevant air navigation regulations apply.

Category B (R). The examination for the Aircraft Radio Maintenance Engineer's Licence, Cat. B (R) is in two parts:

Part 1: Section A: Basic Radio Theory; Applied Radio Theory; Section B: Oral and Practical Tests.

Part 2 (Optional): Section A: Fundamentals of Aircraft Radar and Pulsed Hyperbolic Techniques; Theory of Pulsed Circuits and U.H.F. Techniques; Section B: Oral and Practical Tests.

Part 1 must be taken by all candidates. Successful candidates are issued with a Cat. B (R) licence valid for aircraft radio communication apparatus and auxiliary equipment and radio-navigational aids but excluding radar aids and pulsed hyperbolic systems. Part 2 is an optional examination, but it must be taken by applicants who wish to extend the privileges of their licences to cover radar aids and pulsed hyperbolic systems.

Successful candidates are awarded a Certificate of Proficiency which they must produce when they apply for the grant of a licence. They must also have experience identical with that required for the issue of a Cat. A (R) licence.

TELECOMMUNICATIONS TECHNICAL OFFICERS (Ministry of Aviation)

The work of Ministry of Aviation telecommunication engineers covers communications, radio-navigational aids, radar equipment, electronic computers and air traffic control devices.

The Ministry recruits at two levels: Radio Technicians at the age of 19+ and Telecommunications Technical Officers between the ages of 23 and 39. Most Telecommunications Technical Officers are in fact promoted Radio Technicians.

Radio Technicians. Candidates for appointment must be at least 19. No formal educational qualifications are required, but preference is given to candidates who have the C.G.L.I. Intermediate Certificate in Telecommunications Engineering (Course No. 49) or other qualifications of equivalent or higher standard.

Successful candidates are sent on a course at the Ministry of Aviation's Civil Aviation Signals Training Establishment, Bletchley, Buckinghamshire. The course lasts about nine weeks and is intended to revise basic principles, introduce transistor techniques and familiarise students with equipment in general use. After the initial course there is a further three weeks' training on additional equipment.

Telecommunications Technical Officers. Radio Technicians who have had five years' experience and hold the O.N.C. in Electrical Engineering or the C.G.L.I.'s third year certificates in the Telecommunications Technician's Course (No. 49) may be promoted to Telecommunications Technical Officers.

The Civil Service Commission also conducts open competitions for direct admission to posts as Telecommunications Technical Officers, Grade III. Candidates must be not less than 23 and under 40. They must hold either the O.N.C. in Electrical Engineering or the C.G.L.I. former Intermediate Certificate in Telecommunications Engineering (Course No. 50) or the C.G.L.I. new Intermediate Telecommunications Certificate (Course No. 49) and the C.G.L.I. certificates in Mathematics B, Telecommunications Principles B and Radio and Line Transmission B (also Course No. 49).

Signals Officers (Ministry of Aviation). The Civil Service Commission recruits for the Ministry of Aviation direct entry Signals Officers. Their duties include planning, evaluation, installation and supervision of the operation and maintenance of civil aviation telecommunications ground services which are predominantly concerned with radio and radar aids to navigation at aerodromes and telecommunications centres and radio and landline communication systems, the co-ordination of the development of new radio and radar techniques and systems and their application to civil air transport.

Candidates must be at least 23 and have experience in telecommunications. They must:

- (i) Be a Corporate Member of the Institution of Electrical Engineers or an Associate Fellow of the Royal Aeronautical Society.
- (ii) Have passed either Parts I, II and III of the Associate Membership Examination of the Institution of Electrical Engineers or Parts I and II of the Associate Fellowship examination of the Royal Aeronautical Society or examinations exempting them from those of the Institution or the Society.
- (iii) Hold a degree or Diploma in Technology in Physics or Electrical Engineering.

CERTIFICATES OF THE CITY AND GUILDS OF LONDON INSTITUTE

The C.G.L.I. conducts examinations in Telecommunications and in seven Aeronautical Craft subjects.

The Telecommunication Technician's Course (No. 49) is a refinement of the former course (No. 50) in Telecommunications Engineering. The syllabuses are still in the process of review, with especial reference to the relation between the Course and other technicians' courses and the General Course in Engineering.

Certificates are awarded in the separate subjects of the course; the two principal awards are an Intermediate Certificate and a Final grouped course Certificate. The course covers four years.

Aeronautical Craft Certificates (Course Nos. 280 to 286) are awarded in the following subjects (the course numbers are given in parentheses):

- Aircraft Production—Power Plant (No. 280)
- Aircraft Production—Airframe (No. 281)
- Aircraft Maintenance—Power Plant (No. 282)
- Aircraft Maintenance—Airframe (No. 283)
- Aircraft Maintenance—Electrical (No. 284)
- Aircraft Maintenance—Instruments (No. 285)
- Electronics—Craft Practice (Aircraft) (No. 286)

BAKERY AND CONFECTIONERY

NATIONAL DIPLOMAS

Higher National Bakery Diploma. This is the highest qualification in Bakery. It is awarded by the Joint Committee of the National Board for Bakery Education and the Department of Education and Science. It is taken by candidates who hold the

National Bakery Diploma after a further two years' full-time study.

A course leading to this qualification is offered by the Borough Polytechnic, London.

National Bakery Diploma. This qualification is also awarded by the Joint Committee of the National Board for Bakery Education and the Department of Education and Science. It can be taken after a two-year full-time course at a technical college or after part-time study during apprenticeship.

Entry requirements are 'O' level G.C.E. (or equivalent) passes in four subjects including English Language or Literature and a science subject other than Domestic Science.

The following Colleges offer courses leading to the National Bakery Diploma:

Birmingham College of Food and Domestic Arts; Technical College and School of Art, Blackpool; Cambridgeshire College of Arts and Technology; College of Technology and Commerce, Cardiff; North Gloucestershire Technical College; College of Technology, Leeds; College of Technology, Liverpool; Borough Polytechnic; The Domestic and Trades College, Manchester; Technical College, Plymouth; Salford Technical College; Technical College, Southampton; Denbighshire Technical College.

CITY AND GUILDS OF LONDON INSTITUTE CERTIFICATES

The following qualifications are awarded:

Certificates in Breadmaking and Flour Confectionery (Subject No. 156).

- (i) Basic Craft Certificate in Breadmaking and Flour Confectionery.
- (ii) Advanced Craft Certificate—Breadmaking and Flour Confectionery.
- (iii) Technical Certificate—Breadmaking and Flour Confectionery.
- (iv) Full Technological Certificate—Microbiology and Hygiene; Bakery Organisation.

Certificate in Design and Decoration of Flour Confectionery (Subject No. 157).

Certificate in Cocoa, Chocolate and Sugar Confectionery Manufacture (Subject No. 158).

- (i) Intermediate.
- (ii) Final.

A Basic Certificate is also offered in Flour Milling (Subject No. 112).

QUALIFICATIONS OF THE REGIONAL EXAMINING UNIONS

(i) UNION OF LANCASHIRE AND CHESHIRE INSTITUTES

A Preliminary Bakery and Pastry Certificate is awarded.

(ii) NORTHERN COUNTIES TECHNICAL EXAMINATIONS UNION

A Certificate in Bakery is awarded.

SCOTTISH QUALIFICATIONS

The Scottish Certificate of Proficiency in Baking and Confectionery. This qualification is awarded by the National Joint Committee for the Scottish Baking Industry and the Education Authorities. It is taken after a four-year part-time course. Courses are available at the Burnbank School of Engineering, Hamilton, Lanarkshire, and Falkirk Technical College.

The Craft Certificate in Bakery and Confectionery. This is also awarded by the National Joint Committee for the Scottish Baking Industry and the Education Authorities. It can form the first part of the Certificate in Proficiency in Baking and Confectionery and is taken after a two-year part-time course at the Burnbank School of Engineering, Hamilton, Lanarkshire.

BANKING

The Institute of Bankers

10, Lombard Street, London, E.C.3

Fellow (F.I.B.). The highest grade of membership. Fellows are elected by the Council and are usually Associates of managerial status.

Associate (A.I.B.). This class consists exclusively of members who hold the Banking Diploma or the Trustee Diploma of the Institute, taken after part-time study.

Ordinary Member. This grade of membership is open to any member of the staff of a recognised bank. All candidates for the Associateship examinations of the Institute must first register as Ordinary Members.

EXAMINATIONS

The Associateship Diploma. Part I of the Diploma examinations covers English, economic studies, law and book-keeping. Part II of the Banking Diploma is concerned with monetary theory, accountancy, law, finance of foreign trade, and practice of banking. Part II of the Trustee Diploma covers law relating to wills, elementary conveyancing, trust taxation and accounting, investment and trust administration. The standard of Part II is that of a pass degree.

EXEMPTION

Exemption from the English paper in Part I is granted to all U.K. graduates. Subject-for-subject exemption in Part I is granted to the holders of the following qualifications: a degree or 'A' level G.C.E. pass; the final certificate of other approved professional bodies; a National Certificate or Diploma in Business Studies (a credit level pass is required in the Ordinary National Certificate).

COURSES OF INSTRUCTION

About 120 Technical Colleges offer part-time courses leading to the Institute's Diplomas.

OPTIONAL SUBJECTS

The Institute also conducts examinations in optional subjects for the following qualifications:

Diploma in Business French, German, Italian, Russian, Spanish.

Certificate in Business French, German, Italian, Russian, Spanish.

Diploma in Taxation.

These do not form part of the requirement for A.I.B. Members normally obtain this before taking optional subjects.

Courses are available at Colleges offering part-time courses leading to the examinations of the Institute of Bankers.

The Institute of Bankers in Scotland

62, George Street, Edinburgh

Associate (A.I.B.(Scot.)). The examination for this qualification is taken in two parts after part-time study.

The Intermediate Examination must be completed in three successive years, and is open to members of the staff of a Scottish

Bank of issue provided that they have passes in S.C.E. or G.C.E. Ordinary Grade in four subjects including English. The Examination covers English and economics, accounting and Scottish Law.

Complete exemption from the Intermediate Examination is granted to holders of: any degree of a U.K. university; the Final Certificate of the Institute of Bankers, the Chartered Institute of Secretaries or of any approved Accountancy body; the Senior Commercial Certificate of the Scottish Council for Commercial Education. Subject-for-subject exemption is granted for Higher Grade S.C.E. passes; passes in Part I of the Institute of Bankers' examinations. Certain exemptions are granted to holders of S.C.E. with specified Higher Grade passes. On completing the Intermediate Examination candidates are admitted as Student Members of the Institute.

The Final Examination is open to those who have passed the Intermediate and are Student Members. The examination must be completed in five successive years, and covers banking law, investment, accounting, currency and foreign exchange.

Fellow (F.I.B.(Scot.)). Associates who have passed the Final Examination of the Institute at least ten years before their nomination and who hold senior banking appointments may, at the Council's discretion, be elected as Fellows of the Institute.

BATHS MANAGEMENT

The Institute of Baths Management (Inc.)

39, Lower Clapton Road, London, E.5

Members must be male officers or other people with approved qualifications in public or private baths or laundries.

Fellow (F.Inst.B.M.). Fellowship is awarded in recognition of outstanding service to the Institute.

Member (M.Inst.B.M.). Associate members who hold positions of sole responsibility or senior administrative positions in the baths service may be elected to full Membership.

Associate Members (A.M.Inst.B.M.) are those who have passed the Associate Member Testamur Examination.

Student Members (S.M.Inst.B.M.) are those who have passed the Institute's Student Member Examination.

Other grades of membership of the Institute are **Retired Member** and **Honorary Member**.

EXAMINATIONS

Student Member Examination. Candidates must be at least 19 years old. They must produce evidence of a good educational standard or pass a preliminary educational test, and they must have had a period of training and possess a knowledge of swimming and life saving.

Associate Member Examination; Testamur of the Institute. Candidates must be at least 24 years old and have had at least five years' experience in the baths service. The examination must be taken within four years of passing the Student Member Examination, provided that the candidate is old enough.

The Testamur is awarded as 'pass' and 'honours pass'.

Exemptions from the examinations may be granted to those who hold one of the following qualifications: a university degree; Associate Membership of the Institutions of Electrical, Mechanical or Civil Engineers; Membership of the Institute of Marine Engineers; Membership of the Institute of Fuel; Diploma in Public Municipal Administration; first class Ministry of Transport Certificate; Final Technological Certificate of the City and Guilds of London Institute.

BEAUTY CULTURE

The Society of Beauticians

44, Old Bond Street, London, W.1

Fellows (F.S.B.) must have been full members of the Society for at least four years.

Membership (M.S.B.) is automatically granted to those who hold the Society's International Beautician's Diploma. It is also granted to holders of the Society's Diploma in Massage and Beauty Therapy or Beauty Specialist's Diploma provided that they have had four years' experience, one of them as an Associate of the Society. Experienced beauticians or those holding other qualifications—the Diploma of a private school of Beauty for example—may also be admitted as Members. Members must be at least 21 years old.

Associateship (A.S.B.) is granted to holders of the Society's Diploma in Massage and Beauty Therapy or Beauty Specialist's Diploma. An Associate must be at least 17 years old. A candidate

under 21 who passes the International Beautician's Diploma Examination is admitted as an Associate until she can take up full Membership when she is 21. Experienced beauticians or those holding other qualifications may be admitted as Associates.

Registered Students are those who are studying for the Society's examinations, at a recognised school or by a course of home study.

EXAMINATIONS

These examinations are taken after a course at a school recognised by the Society or after home study.

The International Beautician's Diploma (M.S.B., Int.B.Dip.) gives admission to Membership of the Society. The Society states that it 'is recognised throughout the world' and 'sets a standard suitable for State Registration everywhere'. Candidates should normally hold G.C.E. 'O' level passes in four subjects preferably including English and a science or art subject.

The Diploma in Massage and Beauty Therapy (A.S.B., Dip.M.B.T.) gives admission to Associateship of the Society. It is intended for beauticians who wish to specialise in Swedish massage and the correction of figure faults by exercise, and also for physiotherapists who want to practise Beauty Therapy. Candidates should normally have passed G.C.E. 'O' level in at least four subjects including, if possible, English and a science or art subject.

The Beauty Specialist's Diploma (A.S.B., B.Dip.) also admits holders to Associateship of the Society. The syllabus covers Elementary Anatomy and Physiology, Salon Administration and all types of treatment for the face, hands and feet.

The Make-up and Manicure Diploma qualifies holders for Associateship of the Society (A.S.B.). It is the lowest qualification awarded by the Society and gives basic instruction in Make-up and Manicure for hairdressers or beauty demonstrators.

The Diploma in Epilation (Dip.E.) is a specialist Diploma, the examinations for which are open only to holders of a basic diploma (those above) of the Society or experienced beauticians who have been exempted from the Society's examinations.

The training covers all methods of Epilation by wax, chemical and electrical methods.

International Beauty Teacher's Diploma (Int.B.T.Dip.). The examinations for this Diploma are open only to those who have passed or obtained exemption from the examinations for the International Beautician's Diploma or the Diploma in Massage and Beauty Therapy or the Beauty Specialist's Diploma. Candidates

should normally have passed G.C.E. 'O' level in at least four subjects including, if possible, English and a science or art subject.

The syllabus covers Theoretical and Practical Teaching and School Administration and gives basic instruction to beauticians intending to set up their own schools. Holders of the Diploma are admitted to the Teachers' Register of the Society.

The Society of Beauty Specialists of Great Britain

This Society, whose aim is to improve the standard of knowledge of trained beauty specialists, conducts examinations for a Diploma and Supplementary Certificate. Evening refresher classes leading to the examination are run at the Delia Collins Beauty Salon and School (40, Sloane Street, London, S.W.1). These classes are open to members of the Society—membership is by subscription. The examinations are held twice yearly.

Diploma of the Society of Beauty Specialists of Great Britain. Candidates are required to pass in all three sections of the written examination and in a practical demonstration of facial treatment. These three parts may be taken singly or in one sitting.

Supplementary Certificates are awarded in the Use of Electrical Equipment and in Body Treatments (with special emphasis on slimming).

The Institute and Society of Practitioners in Electrolysis 59, Preston New Road, Preston, Lancashire

Members must be at least 21 years old and have passed the Institute's full entrance examination for the Diploma in Remedial Electrolysis.

Associate Member. The Certificate of Associate Membership is awarded to full-time practising electrologists who satisfy the Examining Board by a practical demonstration of their high standard of operating technique.

EXAMINATIONS

The Diploma in Remedial Electrolysis (D.R.E.) is awarded to candidates successful in the Membership Examination of the Institute, which consists of a written paper, an oral test and a practical demonstration, covering all aspects of Electrolysis. Candidates must have taken a course of training at least six months in length, or have been in practice for two years. There are no exemptions from the Examination. Holders of the Diploma are

recognised by the Ministry of Health as competent to work under the general supervision of hospital dermatologists.

The Institute offers a full-time course leading to this Examination.

Certificate of Associate Membership. This examination consists of a practical demonstration and an oral test on the practice of electrolysis. Candidates must be practising full-time electrologists.

COURSES

There are a large number of private schools of Beauty Culture in London and throughout the country. Some prepare students for the Society of Beautician's Examinations and many grant their own diplomas. A six-month full-time course at the London College of Fashion, providing training in all aspects of Beauty Culture and Business Management, started in January 1966. Candidates must be over 21 years old and have reached G.C.E. standard or equivalent in English and Science.

BIOLOGICAL SCIENCES

Institute of Biology

41, Queens Gate, London, S.W.7

Member (M.I.Biol.). Members must have one of the following: First or second class honours degree in a biological subject or subjects, granted by approved universities, or first or second class honours Dip.Tech. in Applied Biology, or a National Diploma in Horticulture with honours. In addition, three years' responsible experience in biology or its applications is required. Alternatively, a third class or pass degree in a biological subject or a pass in Dip. Tech. in Applied Biology, or a National Diploma in Horticulture or Poultry Technology, with five years' approved experience, or a Ph.D. degree in biology granted by an approved university is required. Candidates without one of these qualifications but with approved experience may sit an examination set by the Institute or submit a thesis or dissertation.

Associate Member (A.M.I.Biol.). Candidates must have one of the following: a recognised degree in a biological subject or subjects; Dip.Tech. in Applied Biology; Higher Endorsed Certificate in Biology or H.N.C. in Biology or Applied Biology; National

Diploma in Agriculture, Dairying, Horticulture, Poultry Husbandry or Poultry Technology; a Teacher's Certificate with Biology as a main subject granted at the end of a three-year recognised course. Alternatively, the Council is prepared to accept other evidence of an adequate training in biology.

Student members must be at least 17 years of age and taking an approved course of instruction leading to the qualifications required for Associate Membership.

Subscribers are persons not qualified to enter one of the other grades of Membership but have a real interest in biology.

The Zoological Society of London

Regent's Park, London, N.W.1

Membership of the Society does not confer professional status.

Ordinary Fellowship (F.Z.S.). This grade is open to persons of at least 21 years of age who are able to satisfy the Council as to their interest in the purposes and activities of the Society.

Scientific Fellows must submit evidence that they are making or have made a contribution to the advancement of Zoology. For example, the following are acceptable qualifications:

- (i) an original contribution to zoological knowledge of a standard judged adequate by the Council, published in a recognised scientific journal, or
- (ii) possession of an approved honours degree in zoology or veterinary science or an equivalent qualification, or
- (iii) possession of a degree or equivalent qualification taken partly in zoology with professional position in zoological work (including any post teaching zoological science up to G.C.E. 'A' level standard).

Associateship is open to persons of at least 14 years of age.

The Society of General Microbiology

c/o Institute of Biology, 41, Queens Gate, London, S.W.7

A non-qualifying Association. Its stated aim is to promote the advancement of Microbiology in all its branches.

The Biochemical Society

20, Park Crescent, London, W.1

This is a non-qualifying body.

The Linnean Society of London

(founded 1788)

Burlington House, Piccadilly, London, W.1

This is not a qualifying body.

Fellowship of the Society is open to any man or woman who takes an active interest in Natural History. Fellows must be at least 21 years of age.

Ordinary Associateship of the Society is open to persons aged between 21 and 29 years of age.

ANATOMY—UNIVERSITY DEGREES

Honours degree courses in Anatomy are offered by the universities listed below. For details of higher and other degrees refer to the entries for individual universities in Part 4. In addition to the specified 'A' level passes indicated, a pass at 'A' level in Chemistry is required or preferred by almost all universities.

Aberdeen. B.Sc.: 4 years. 2 'A' level passes.

Belfast. B.Sc.: 4 years. 'A' levels in Physics and Chemistry.

Birmingham. B.Sc.: 3 years. 3 'A' level passes.

Bristol. B.Sc.: 3 years. 2 'A' levels including Biology.

Cambridge. B.A.: 3 years.

Edinburgh. B.Sc.: 4 years. 3 'A' levels including Physics and Chemistry.

Glasgow. B.Sc.: 4 years. 3 'A' levels.

Leeds. B.Sc.: 3 or 4 years. 'A' levels in Chemistry, Physics, Zoology, Botany or two of these.

Liverpool. B.Sc.: 3 or 4 years. 3 'A' levels including Chemistry and Physics.

London (University College). B.Sc.: 3 years. 3 'A' levels including Chemistry and Physics.

Manchester. B.Sc.: 3 years. Admission after 2nd Medical Professional Examination.

Newcastle. B.Sc.: 3 or 4 years. 3 'A' levels, including Chemistry for 3-year course.

St. Andrews. B.Sc.: 4 years. 2 'A' levels, including Chemistry, Physics or Mathematics.

Sheffield. B.Sc. in Human Biology and Anatomy: 3 years. 3 'A' levels including Chemistry.

Wales (Cardiff). B.Sc.: 3 years. 3 'A' levels.

BACTERIOLOGY—UNIVERSITY DEGREES AND DIPLOMAS

(i) DEGREES

Honours degree courses in Bacteriology are offered at the following universities. The number of 'A' level passes required is shown with each entry. For details of higher and other degrees refer to entries for individual universities in Part 4.

Birmingham. B.Sc.: 3 years. 3 'A' levels including Chemistry.

Edinburgh. B.Sc.: 4 years. 3 'A' level passes including Physics.

Glasgow. B.Sc.: 4 years. 3 'A' level passes.

Leeds. B.Sc.: 4 years. 'A' level passes in Physics and Chemistry.

Liverpool. B.Sc.: 3 or 4 years. 3 'A' level passes including Chemistry.

Newcastle. B.Sc.: 3 or 4 years. 3 'A' level passes.

Strathclyde. B.Sc.: 4 years. 2 'A' level passes.

(ii) DIPLOMAS

University of Leeds: Postgraduate Diploma in Agricultural Bacteriology. 1-year course.

University of London: Academic Postgraduate Diploma in Bacteriology. 1-year course.

University of Manchester: Postgraduate Diploma in Bacteriology. 1-year course.

BIOCHEMISTRY—UNIVERSITY DEGREES AND DIPLOMAS

(i) FIRST DEGREES

Honours degree courses in Biochemistry, Applied Biochemistry and Biological Chemistry are offered at the following universities. The number of 'A' level passes required is shown with each entry. An 'A' level pass in Chemistry is invariably stated as a course requirement. At Bristol and Edinburgh, 'A' level Physics is also required. Details of higher and other degrees in Biochemistry will be found under entries for the individual universities in Part 4.

Aberdeen. B.Sc.: 4 years. 2 'A' levels.

Birmingham. B.Sc. in Biochemistry or Medicinal Biochemical Studies: 3 years. 3 'A' levels.

Bristol. B.Sc.: 3 years. 3 'A' levels.

Cambridge. B.A.: Tripos Part II.

- East Anglia. B.Sc.:** 3 years. 2 'A' levels.
Edinburgh. B.Sc.: 4 years. 3 'A' levels.
Glasgow. B.Sc.: 4 years. 3 'A' levels.
Hull. B.Sc.: 3 years. 3 'A' levels.
Leeds. B.Sc.: 4 years. 3 'A' levels.
Liverpool. B.Sc.: 3 or 4 years. 3 'A' levels.
London (Bedford or University Colleges). B.Sc.: 3 years.
 3 'A' levels'
Manchester. B.Sc.: 3 years. In **Biochemistry or Biological Chemistry.** 3 'A' levels.
Oxford. B.A.: 3 years.
St. Andrews. B.Sc.: 4 years. 2 'A' levels.
Sheffield. B.Sc.: 3 years. 3 'A' levels.
Southampton. B.Sc. in Physiology and Biochemistry:
 3 years. 3 'A' levels.
Sussex. B.Sc.: 3 years. 2 or 3 'A' levels.
Wales. B.Sc.: at Aberystwyth in **Agricultural Biochemistry or Biochemistry;** Bangor, **Biochemistry or Soil Science;** Cardiff, **Biochemistry.** 3 'A' levels.

(ii) DIPLOMAS

University of London: Academic Postgraduate Diploma in General Biochemistry. 1 year full-time or 2 years part-time.

London (University College): College Diploma (postgraduate) in Biochemistry. 1-year course.

(iii) DEGREES OF THE FORMER C.A.T.'S.

The following institutions now offer degree courses:

Bristol C.S.T. B.Sc. in Applied Biochemistry: 4-year sandwich course. 2 'A' levels required.

Chelsea C.S.T. B.Sc. in Biochemistry: 4-year sandwich course. 2 'A' levels.

Heriot-Watt College. B.Sc. in Applied Biochemistry: 4-year sandwich course. 2 'A' levels.

University of Strathclyde. B.Sc.: 4 years. 2 'A' levels.

BIOLOGY—UNIVERSITY DEGREES AND DIPLOMAS

(i) DEGREES

Honours degree courses are offered at the following universities. The number of 'A' level passes required is shown with each entry. For details of higher and other degrees see entries for individual universities in Part 4.

Birmingham. B.Sc. in Biological Sciences: 3 years. 3 'A' level passes.

East Anglia. B.Sc. in Biological Sciences: 3 years. 2 'A' level passes, including Chemistry.

Keele. B.A.: 4 years. 2 'A' levels.

Lancaster. B.A.: 3 years. 2 approved 'A' level passes.

Sussex. B.Sc.: 3 years. 2 'A' level passes.

Strathclyde. B.Sc. in Biology/Microbiology: 4 years. 2 'A' level passes.

York. B.A.: 3 years. 3 'A' level passes.

Wales (Aberystwyth). B.Sc.: 3 years. 3 'A' level passes including Botany and Zoology.

Courses in **Marine Biology** are offered at East Anglia and Wales (Bangor).

(ii) DIPLOMAS

University of Birmingham: 1-year course (postgraduate diploma) in Biological Engineering.

University of Edinburgh: 1-year postgraduate diploma course in Biology.

(iii) DEGREES IN APPLIED BIOLOGY (COURSES OF FORMER C.A.T.'s)

The following honours degree courses in Applied Biology are now offered at former C.A.T.'s:

Bradford Institute of Technology. B.Tech.: 4 years. 2 'A' levels including Chemistry.

Bristol C.S.T. B.Sc.: 4 years. 2 'A' levels.

Brunel College. B.Tech.: 4 years. 2 'A' levels.

Salford Royal C.A.T. B.Sc.: 4 years. 2 'A' levels.

All these are sandwich courses. Good O.N.C. and O.N.D. passes will be accepted in lieu of 'A' level degree passes. A four-year sandwich course for an honours degree in Biological Science is offered at Birmingham.

(iv) C.N.A.A. DEGREE

A three-year course for the B.Sc. Honours degree in Biology is offered at Portsmouth College of Technology.

BIOLOGY—NATIONAL DIPLOMAS AND CERTIFICATES

In England, there are courses offered leading to **Higher National Certificates (H.N.C.)** in Applied Biology. In Scotland, the equivalent is the Higher National Certificate in Biology. These

courses follow after the two- or three-year **Ordinary National Certificate (O.N.C.)** courses, and last two years.

A two-year full-time course leading to the **Higher National Diploma** in Biology is offered at Wolverhampton and Staffordshire College of Technology.

BIOPHYSICS—UNIVERSITY DEGREE AND DIPLOMA

(i) FIRST DEGREE

Leeds. B.Sc.: 4 years. 'A' level passes in Chemistry, Physics and Zoology required.

(ii) DIPLOMA

University of Edinburgh: Postgraduate Diploma in Biophysics. 1-year course.

BOTANY AND ZOOLOGY—UNIVERSITY DEGREES AND DIPLOMAS

Honours degree courses are offered in Botany and Zoology at the universities listed below. The number of 'A' level passes (in Science and Mathematics) is shown with each entry. Most universities show a preference (in some cases it is a requirement) for Chemistry. Details of higher and other degrees in Botany and Zoology will be found under entries for the individual universities in Part 4.

Aberdeen. B.Sc.: 4 years. 2 'A' levels.

Belfast. B.Sc.: 3 or 4 years. 2 'A' levels.

Birmingham. B.Sc.: 3 years. 3 'A' levels.

Bristol. B.Sc.: 3 years. 2 'A' levels.

Cambridge. B.A.: Tripos Part II.

Chelsea C.S.T. B.Sc.: 3 years. Botany, 2 'A' levels; Zoology, 3 'A' levels.

Durham. B.Sc.: 3 years. 3 'A' levels. **B.Sc. Joint Honours:** Botany and Zoology.

East Anglia. B.Sc.: 3 years. 2 'A' levels.

Edinburgh. B.Sc.: 4 years. 3 'A' levels.

Exeter. B.Sc.: 3 years. 3 'A' levels.

Glasgow. B.Sc.: 4 years. 3 'A' levels.

Hull. B.Sc.: 3 years. 3 'A' levels.

Leeds. B.Sc.: 3 years with 3 'A' levels; 4 years with 2 'A' levels.

Leicester. B.Sc.: 3 years. 2 or 3 'A' levels.

Liverpool. B.Sc.: 3 or 4 years. 3 'A' levels.

London. B.Sc.: 3 years.

Bedford College: 2 'A' levels.

Imperial College: 2 'A' levels for Botany; 3 'A' levels for Zoology.

King's: 3 'A' levels.

Q.M.C.: 2 'A' levels.

Royal Holloway: 2 'A' levels.

University College: 3 'A' levels for Botany; 2 'A' levels for Zoology.

Westfield: 2 'A' levels.

Manchester. B.Sc.: 3 years. 2 or 3 'A' levels.

Newcastle. B.Sc.: 3 or 4 years. 2 or 3 'A' levels.

Nottingham. B.Sc.: 3 or 4 years. 2 or 3 'A' levels.

Oxford. B.A.: 3 years.

Reading. B.Sc.: 3 years. 2 'A' levels.

St. Andrews. B.Sc.: 4 years. 2 'A' levels.

Sheffield. B.Sc.: 3 years. 3 'A' levels.

Southampton. B.Sc.: 3 years. 3 'A' levels.

Wales. B.Sc.: 3 years. At Aberystwyth, Bangor, Cardiff and Swansea. 3 'A' levels.

B.Sc. (Special) degree courses are also offered at:

Cambridge College of Arts and Technology: Botany or Zoology.

Portsmouth College of Technology: Botany or Zoology.

Sir John Cass College: Zoology.

Polytechnic, Regent Street: Zoology.

GENETICS—UNIVERSITY DEGREES AND DIPLOMA

(i) FIRST DEGREES

The following universities offer honours degree courses in Genetics:

Cambridge. B.A.: Tripos Part II.

Edinburgh. B.Sc.: 4 years. 3 'A' levels including Physics and Chemistry.

Glasgow. B.Sc. (with Biochemistry, Physiology or Zoology): 4 years. 3 'A' level passes.

Liverpool. B.Sc.: 3 or 4 years. 3 'A' levels (Physics and Chemistry preferred).

Sheffield. B.Sc. in Genetics with Microbiology: 3 years.

(ii) DIPLOMA

University of Edinburgh. Postgraduate Diploma in Animal Genetics. 1-year course.

MICROBIOLOGY—UNIVERSITY DEGREES AND DIPLOMAS

(i) FIRST DEGREES

Honours degree courses in Microbiology are offered at the following universities. The number of 'A' passes required is shown with each entry. For details of higher and other degrees refer to entries for individual universities in Part 4.

Battersea C.A.T. B.Sc.: 3 years. 3 'A' levels.

Belfast. B.Sc.: 4 years. 'A' levels in Physics and Chemistry.

Birmingham. B.Sc.: 3 years. 3 'A' levels including 2 from Physics, Chemistry and Mathematics.

Bristol. B.Sc.: 3 years. 2 'A' levels.

East Anglia. B.Sc.: 3 years. 2 'A' levels.

London (Queen Elizabeth or University College). B.Sc.: 3 years. 3 'A' levels including Chemistry.

Reading. B.Sc.: 3 years. 2 'A' levels including Chemistry.

St. Andrews. B.Sc.: 4 years. 2 'A' levels including Chemistry.

Strathclyde. B.Sc.: 4 years. 2 'A' levels.

Wales (Cardiff). B.Sc.: 3 years. 3 'A' levels in Chemistry, Botany, Zoology.

(ii) CERTIFICATE AND DIPLOMA

University of Cambridge: Postgraduate Certificate in Microbiology and Plant Biochemistry. 1-year course.

University of Sheffield: Diploma in Microbiology. 1-year course.

PHYSIOLOGY—UNIVERSITY DEGREES

Honours degree courses are offered at the universities listed below. Almost all state that an 'A' level pass in chemistry is required or preferred. For details of higher and other degrees in physiology refer to entries for individual universities in Part 4.

Aberdeen. B.Sc.: 4 years. 2 'A' level passes.

Belfast. B.Sc.: 4 years. 2 'A' levels.

Birmingham. B.Sc.: 3 years. 3 'A' levels including Chemistry.

Bristol. B.Sc.: 3 years. 2 'A' levels.

Cambridge. B.A.: 3 years.

Chelsea. B.Sc.: 3 years. 3 'A' levels.

Edinburgh. B.Sc.: 4 years. 3 'A' levels including Physics and Chemistry.

Glasgow. B.Sc.: 4 years. 3 'A' levels.

Leeds. B.Sc.: 3 or 4 years. For 3-year course, 'A' levels in Physics, Chemistry and Zoology.

Liverpool. B.Sc.: 3 or 4 years. 3 'A' levels including Chemistry and Physics.

London (Bedford and University Colleges). B.Sc.: 3 years. 3 'A' levels including Chemistry and Physics.

Manchester. B.Sc.: 3 years. 3 'A' levels.

Newcastle. B.Sc.: 3 or 4 years. 3 'A' levels.

Oxford. B.A.: 3 years. In Animal Physiology.

Reading. B.Sc.: in Physiological Chemistry. 3 years. 2 'A' levels.

St. Andrews. B.Sc.: 4 years. 2 'A' levels.

Sheffield. B.Sc.: 3 years. 3 'A' levels.

Southampton. B.Sc.: 3 years. 3 'A' levels.

Wales (Cardiff). B.Sc.: 3 years. 3 'A' levels.

BOOK-KEEPING

The Institute of Book-Keepers Ltd.

(by guarantee)

139, Stoke Newington High Street, London, N.16

Fellow (F.C.B.I.). A candidate for Fellowship must have had at least five years' experience in a senior position in book-keeping or as a teacher of the subject. He must be over 25 years old and have passed the Institute's Final examination (*see below*) or a recognised equivalent. Fellows may describe themselves as 'Corporate Book-keepers'. The Articles of Association of the Institute retain the right for Members (Fellows and Associates) to use the letters F.B.I. and A.B.I. and to describe themselves as 'Certified Book-keepers'.

Associate (A.C.B.I.). An Associate must have had at least three years' experience as a book-keeper or as a teacher of book-keeping. He must be at least 21 years old and have passed the Institute's Final examination (*see below*) or a recognised alternative. An Associate may describe himself as a 'Corporate Book-keeper'. The Articles of Association of the Institute retain the right for

Members (Fellows and Associates) to use the letters F.B.I. and A.B.I. and to describe themselves as 'Certified Book-keepers'.

Licentiate (L.C.B.I.). A Licentiate is one who has passed the Institute's Final examination (*see below*) or a recognised alternative, but has not yet had sufficient experience to qualify for Associate Membership.

Registered Student. Candidates preparing for the Institute's qualifying examinations (*see below*) are required to register as students. Those preparing for other examinations of the Institute are not required to register.

(i) THE QUALIFYING EXAMINATIONS

(for Membership of the Institute)

These examinations are planned to correspond in standard with the following national examinations:

Book-keeper's examination

Preliminary Stage—C.S.E. (*see Part 1*)

Intermediate Stage—Certificate of Office Studies (*see Part 2 and Commerce*)

Final Stage—O.N.C. in Business Studies (*see Part 2 and Commerce*)

Preliminary Stage

The subjects of this examination, open to Registered Students only, are book-keeping, commercial arithmetic, business knowledge and English. Complete exemption from the examination will be granted to candidates who have four passes in C.S.E. (or a recognised equivalent) including English and arithmetic or book-keeping or accounts. Students who do not qualify for total exemption may be granted subject-for-subject exemption. Candidates who are at least 19 years old and have had three years' business experience may also be granted exemption.

Intermediate Stage

The Intermediate examination includes papers on book-keeping; commercial arithmetic; business knowledge; economic geography; English; and office equipment (with special reference to mechanised accounts). Subject-for-subject exemption may be granted to holders of G.C.E., or the Certificate in Office Studies or a recognised alternative. Candidates must have passed or been exempted from the Preliminary before taking these examinations.

Final Stage

The Final examination has papers on book-keeping and accounts; company law and practice; costing, economics, commercial law and business statistics. Candidates must have passed or obtained exemption from the Intermediate before taking the Final examination. Exemption from the Final may be granted to those who hold the O.N.C. in Business Studies (with book-keeping and three other subjects at 'credit' level), or the Intermediate qualification of certain recognised professional bodies or an approved alternative qualification.

Courses of study are available at technical colleges, evening institutes or by correspondence.

(ii) OTHER QUALIFICATIONS AWARDED BY THE INSTITUTE

The qualifications in this section do not lead to Membership of the Institute.

Diploma in Book-keeping. The examinations for this Diploma are taken in three stages:

Preliminary Stage

This includes papers on book-keeping, commercial arithmetic, business knowledge and English. Exemption will be granted to candidates who have passed R.S.A. I, London Chamber of Commerce Elementary or another approved examination in book-keeping or accounts.

Intermediate Stage

This covers book-keeping, commercial arithmetic, business knowledge, economic geography, English and office equipment (with special reference to mechanised accounts). Candidates who have passed G.C.E. 'O' level, R.S.A. II, London Chamber of Commerce Intermediate or an equivalent examination (or hold the Certificate in Office Studies) in book-keeping or accounts may be granted exemption from this stage.

Final Stage

This has as its subjects book-keeping and accounts, company law and practice; costing, economics, commercial law and business statistics. No exemptions are granted from this stage.

Diploma in Data Processing. The examination for the Diploma in Data Processing is intended to provide a basic quali-

fication for company secretaries, accountants, and administrators whose work requires them to have some knowledge of the subject. Candidates for the Diploma must already hold the Intermediate certificate of a recognised professional body or an equivalent qualification, or they must have had at least three years' approved experience in data processing.

The examination covers four subjects: machine accounting; computer technology; mechanised systems; and planning and practice of automatic data processing.

Certificate in Mechanised Accounting. The examination for the Certificate in Mechanised Accounting provides a basic qualification for machine operators. Candidates must have had at least six months' experience of machine operating. Holders of the Certificate will be able to enter for a Diploma (at supervisory level), which will probably be introduced in 1967.

The examination covers two subjects: book-keeping and mechanised accounting.

The Book-keeping Teacher's Diploma is a qualification for teachers of book-keeping in colleges of further education, evening institutes and secondary schools. Candidates must either be qualified members of the Institute or of another recognised professional body or have passed an examination of equivalent standard or be qualified teachers.

The examination covers general teaching method and applied teaching method (with book-keeping). Before the Diploma is awarded candidates must have had at least one term's teaching experience in a recognised educational establishment.

QUALIFICATIONS AWARDED BY THE EXAMINING UNIONS

(i) THE ROYAL SOCIETY OF ARTS

Examination in Book-keeping. Stage I (Elementary); Stage II (Intermediate); Stage III (Advanced).

A pass in the book-keeping examination also forms part of the group Certificate for cost clerks and other group Certificates (*see* General Commerce).

An examination in Accounting (Stage III) is also conducted.

(ii) THE LONDON CHAMBER OF COMMERCE

Examination in Book-keeping. Elementary Stage and Intermediate Stage.

(iii) EAST MIDLAND EDUCATIONAL UNION

Examination in Book-keeping. Stage 1; Stage 2; Stage 3 (the most advanced).

(iv) NORTHERN COUNTIES TECHNICAL EXAMINATIONS COUNCIL

Examinations are conducted in **Elements of Commerce and Accounts** and in **Accounting** (I and II).

(v) UNION OF EDUCATIONAL INSTITUTIONS

The Examinations for the **General Commercial Course Certificate** include a paper on Book-keeping (*see* General Commerce).

(vi) UNION OF LANCASHIRE AND CHESHIRE INSTITUTES

Elementary examinations are held in **Book-keeping** and in **Elements of Accounts and Commerce**.

(vii) WELSH JOINT EDUCATION COMMITTEE

Examination in Book-keeping (I and II).

Examination in Accounting.

BOOT AND SHOE MANUFACTURE

The British Boot and Shoe Institution

5, Castilian Terrace, Northampton

Fellow (F.B.S.I.). Fellowship of the Institution may be granted to those who have made a special contribution to the industry's technology or have otherwise rendered meritorious service and who comply with the Institution's requirements in other respects.

Associate (A.B.S.I.). The Institution conducts its own examinations for Associate membership.

Graduate. The Institution conducts its own examinations for Graduate membership, but accepts certain other examinations in lieu.

Student members are those who intend to proceed to the examinations for Graduateship and Associateship.

COURSES OF INSTRUCTION

Courses of instruction for the examinations of the British Boot and Shoe Institution are provided at the following establishments:

Hinckley College of Further Education; Allen Technical College, Kendal; Soundwell Technical College, Bristol; Leicester College of Technology and Commerce; Mansfield College of Art; College of Technology, Northampton; Northamptonshire County Colleges at Kettering and Rushden; Norwich City College and Art School; Stafford College of Further Education; Strode Technical College, Somerset; Rossendale College of Further Education; Leeds College of Technology; Derby and District College of Technology; Cordwainers Technical College, London.

COLLEGE DIPLOMAS AND ASSOCIATESHIPS

The following courses and awards are available:

Leicester College of Technology: (2 years full-time) College Diploma in Boot and Shoe Manufacture and (3 years full-time) Diploma in Shoe Design and Fashion Co-ordination.

Cordwainers Technical College, London, E.8*: (3 years full-time) Associateship of the British Boot and Shoe Institution and College Diploma.

Northampton College of Technology: (3 years full-time) College Diploma in Shoe Technology.

*The Cordwainers Technical College, originally the Leather Trades School, is maintained by the Inner London Education Authority. It provides courses on the technique and technology of all branches of the shoe and leather goods industries, including applied science and management. The Northamptonshire local education authority maintains two Boot and Shoe Technical Colleges in Kettering and Rushden, which provide preparatory, day-release and examination courses, mainly for young people employed in the boot and shoe manufacturing industry.

CITY AND GUILDS OF LONDON INSTITUTE
CERTIFICATES

Firms participating in the training scheme prepared by the National Joint Recruitment and Training Council for the boot and shoe manufacturing industry release their trainees for part-time study. Advanced students prepare for the examinations of the

British Boot and Shoe Institution; others prepare for the examinations of the City and Guilds of London Institute, which are in the normal C.G.L.I. craft range, as follows:

<u>Course No.</u>	<u>Subject</u>
137	Boot and Shoe Manufacture (Operative's Basic and Higher Certificates, Advanced and Full Technological Certificates).
138	Surgical Shoemaking (Intermediate and Final).
139	Boot and Shoe Repairing (Basic, Higher and Advanced Certificates).

BREWING

The Institute of Brewing

33, Clarges Street, London, W.1

Associate Membership is open to candidates who:

- (a) pass the Qualifying Examination of the Institute, the subjects of which are Applied Biology, General Biochemistry and the Scientific Principles of Malting and Brewing; or
- (b) hold an approved degree in Science; or
- (c) hold the Diploma in Brewing of Birmingham University; or
- (d) hold the Associateship in Brewing of the Heriot-Watt College, Edinburgh.

Minimum entry requirements for admission to the examination are passes in five G.C.E. subjects including English Language, Chemistry, Mathematics and Physics; Chemistry must be taken at 'A' level and one other subject from Physics, Mathematics, Biology and Botany. O.N.C. in Chemistry and the Endorsed Certificate in Biology are also acceptable.

Student Membership of the Institute of Brewing and of the Incorporated Brewers Guild. A person who is undergoing an academic or practical course of training with a view to qualifying for Associate Membership of the Institute of Brewing is eligible for Student Membership of that Institute or of the Incorporated Brewers Guild. The minimum academic requirements of both bodies are five G.C.E. (or equivalent) 'O' level passes including English Language and, preferably, one or two science subjects.

UNIVERSITY DIPLOMAS AND CERTIFICATES

University of Birmingham: Postgraduate Diploma in Malting and Brewing. 1-year course. Certificates in Malting and in Brewing. 2-year course.

Heriot-Watt College, Edinburgh: College Certificate in Brewing. This is a one-year postgraduate course for candidates with approved Science degrees.

COLLEGE DIPLOMAS AND ASSOCIATESHIPS

Associateship course in Brewing of Heriot-Watt College: 3 years (can be part-time for those in pupilage in Edinburgh breweries or full-time for those with previous practical experience). Entry requirements: (i) S.C.E. including English, Mathematics, Higher Science (Chemistry plus Physics, Chemistry or Physics and Botany or Zoology) or Higher Chemistry plus Ordinary Physics, Botany or Zoology. (ii) G.C.E. including English Language, Mathematics, Physics and Chemistry. 2 'A' levels including Physics and Chemistry plus 4 'O' levels or 3 'A' levels and 2 'O' levels (Physics and Chemistry). (This course is now to lead to the award of a pass degree.)

BUILDING

The Institute of Builders

(incorporated 1884)

48, Bedford Square, London, W.C.1

The Institute, which was founded in 1834, is the professional institution for building.

There are three routes to membership of the Institute, reflecting the pattern of technical education now developing generally and based upon standards of general education and type of course followed. The corresponding grades are Technician (Construction Technician's Course), Licentiate (H.N.C.) and Associate (degree level). (Student membership is compulsory unless the applicant is already a Graduate, Technician or Licentiate of the Institute.)

Fellow (F.I.O.B.). Associate members may be transferred to Fellow membership without examination provided they have appropriate experience in building practice, teaching or research. Older men who have acquired a degree of eminence in these fields may be admitted without examination.

Associate (A.I.O.B.). For admission to Associate membership a candidate must be at least 23 years of age and comply with the requirements of one of the following groups:

Group A. (i) Hold a G.C.E. with passes in six subjects including English, Mathematics and either Physics or Chemistry; Mathematics and one additional subject from Physics, Chemistry or Building Construction must be at 'A' level; or hold an equivalent alternative qualification. (ii) Pass the Intermediate examination or hold an award qualifying for exemption therefrom. (iii) Pass the Final examination Parts I and II. (iv) Have had two years' appropriate experience in building practice, teaching or research of which at least one year has been in building practice.

Group B. (i) Be a Licentiate member of the Institute. (ii) Pass the Final examination Part I or hold an award qualifying for exemption therefrom (*see below*). (iii) Pass the Final examination Part II. (iv) Have had two years' appropriate experience in building practice, teaching or research of which at least one year has been in building practice.

Group C. (i) Hold an award qualifying for exemption from the whole of the Final Part I examination (*see below*). (ii) Pass the Final Part II examination. (iii) Have had two years' appropriate experience in building practice, teaching or research of which at least one year has been in building practice.

Mature candidates may be admitted in accordance with one of the following schemes:

Scheme A. Candidates over 35 who have been engaged for at least seven years in responsible positions in building practice, teaching or research are required to submit a thesis, take an oral examination upon it and to take papers in Law, Economics of Industry and management subjects as in the Final examination, but with a higher pass mark.

Scheme B. Candidates over 45 who have been engaged for at least ten years in very responsible positions in building practice, teaching or research are required to submit a thesis and to take an oral examination upon it.

Licentiate (L.I.O.B.). Candidates must be at least 21 and have had two years' appropriate experience in building practice, teaching or research of which at least one year has been in building

practice and comply with the requirements of one of the following groups:

Group A. (i) G.C.E. 'O' level in four subjects including Mathematics, a Science subject and a subject requiring the descriptive use of English or hold an alternative qualification. (ii) Pass the Intermediate examination or hold an award qualifying for exemption therefrom (*see below*). (iii) Pass the Interim Licentiate examination.

Group B. (i) Be a Technician member of the Institute. (ii) G.C.E. 'O' level in a subject requiring the descriptive use of English or pass the Institute's Intermediate examination paper History of Building and Structure of the Industry or an externally assessed examination in this subject under the scheme for National Certificates and Diplomas in Building. (iii) Pass the Interim Licentiate examination.

Group C. Hold an award qualifying for exemption from the whole of the Interim Licentiate examination (*see below*).

Technician (Tn.I.O.B.). Candidates must be at least 21, hold the Construction Technician's Certificate of the C.G.L.I. or have passed the Intermediate examination or the Interim Licentiate examination or the Final Part I examination. There is no examination for admission to Technician membership and candidates may also be admitted in respect of *either* the following single awards in the general field of building:

H.N.C. or O.N.C. in Building;

The Intermediate Examinations of the Institute of Builders or of the Royal Institution of Chartered Surveyors;

The former Intermediate or present First Examination of the Institute of Quantity Surveyors;

The Building Surveyor's Certificate of the Royal Institute of British Architects;

The Building Inspector's Certificate of the Institution of Municipal Engineers;

The Part II Examination of the Institute of Clerks of Works.

or One of the awards in the general field of building from Group I below, together with one of the specialist awards from Group II:

Group I (General)

O.N.C. in Building; or The Military Clerks of Works Certificate of the Royal School of Military Engineering, Chatham; or The Part I Examination of the Institute of Clerks of Works.

Group II (Specialist)

The Part II Examination in Builders' Quantities; or A Final or Advanced Building Craft Certificate; or The Certificate in Concrete Technology (Supervisory level) of the City and Guilds of London Institute.

or The following single awards in a specialist field of building:

The Certificate in General Foremanship Studies of the City and Guilds of London Institute;

Associateship Examination of the Institute of Building Estimators;

The H.N.C. in Civil Engineering;

The Graduateship Examination in Structural Engineering of the City and Guilds of London Institute;

The Final Certificate in Structural Engineering of the City and Guilds of London Institute;

The Full Technological Certificate (revised) of the City and Guilds of London Institute;

The Fellowship Examination of the Incorporated British Institute of Certified Carpenters.

Candidates must have had two years' appropriate experience in building practice, teaching or research of which at least one year has been in building practice.

Graduate. Candidates must have passed or been exempted from the whole of the Intermediate and Final Part I examination.

Student. Candidates must be at least 16, have been accepted for, be engaged in or have completed a general course in building or have completed a specialist building course.

PROFESSIONAL EXAMINATIONS

The Institute conducts the **Intermediate** and **Interim Licentiate Examinations** and the **Final Part I** and **Final Part II Examinations** (for the Associateship).

EXEMPTIONS FROM THE PROFESSIONAL EXAMINATIONS

The following awards give the holder exemption in full from the **Intermediate Examination**:

- (a) All awards giving complete exemption from:
 - The Final Part I Examination (*see below*).
 - The Interim Licentiate Examination (*see below*).
- (b) Technician membership of the Institute of Builders.

- (c) First degrees of universities in the United Kingdom, the Republic of Ireland, Australia, Canada, New Zealand, South Africa and Hong Kong, Associateships of Central Institutions in Scotland and Diplomas in Technology provided that 'A candidate whose degree, Associateship or Diploma examinations did not include Land Surveying shall be required to pass the Institute's Intermediate paper in Land Surveying not later than the date of sitting the Final Part I examination, or pass a college examination in Land Surveying of a standard equivalent to that held for H.N.D. or H.N.C. candidates'.
- (d) H.N.C., H.N.D., O.N.C., O.N.D. in Building or Civil Engineering provided that they include certain specified subjects.
- (e) The two-year full-time course Certificate in Building of the Northern Polytechnic, London.
- (f) Corporate membership of The Royal Institute of British Architects; The Institution of Civil Engineers; The Institution of Structural Engineers; The Royal Institution of Chartered Surveyors; and The Institute of Quantity Surveyors.
- (g) Graduate membership of the British Institute of Management, attained through its membership examinations (Parts I and II), provided that 'Such candidate shall be required to pass the Institute's Intermediate paper in Land Surveying or to submit an alternative examination certificate in that subject acceptable to the Institute'.

The following awards give the holder exemption in full from the

Interim Licentiate Examination:

- (a) All awards giving exemption in full from the Final Part I Examination (*see below*).
- (b) The following single awards in the general field of building:
 - (i) The H.N.D. in Building. (ii) The H.N.C. in Building/Construction awarded in and after 1967 in Scotland and 1969 in England and Wales. (iii) First degrees in Quantity Surveying of universities in the United Kingdom, the Republic of Ireland, Australia, Canada, New Zealand, South Africa and Hong Kong. (iv) Intermediate Examination of the Royal Institute of British Architects or the exempting examination awards of recognised Schools of Architecture. (v) The Final Part I Examination (Quantity Surveying Section) of the Royal Institution of Chartered Surveyors.

- (c) One of the awards in the general field of building from Group I below, together with the specialist award in Group II:

Group I (General)

The H.N.C. in Building awarded up to and including 1966 in Scotland, 1968 in England and Wales; or The Part II Examination of the Institute of Clerks of Works.

Group II (Specialist)

The Certificate in General Foremanship Studies of the City and Guilds of London Institute.

- (d) The following single awards in a specialist field of building:
- (i) First degrees in Structural Engineering of universities in the United Kingdom.
 - (ii) The Final Examination of the Institution of Structural Engineers.
 - (iii) First degrees in Civil Engineering of universities in the United Kingdom and the Diploma in Technology in Civil Engineering.
 - (iv) The Final Examination of the Institution of Civil Engineers.

The following awards give the holder exemption from the subject of **Estimating only at the Interim Licentiate Examination:**

- (a) The H.N.C. in Building provided that it includes the subject of Estimating.
- (b) The Associateship Examination of the Institute of Building Estimators.

The following single awards give the holder exemption in full from the **Final Part I Examination:**

- (a) First degrees of British universities in Building, Estate Management or Architecture.
- (b) The Associateship in Building of a Central Institution in Scotland.
- (c) The Diploma in Technology in Building.
- (d) The Licentiate Diploma of the Institute of Builders awarded under the provisions of previous regulations.
- (e) The Final Examination of the Royal Institute of British Architects or the exempting examination awards of recognised Schools of Architecture.
- (f) The Final Examination (Quantity Surveying Section) of the Royal Institution of Chartered Surveyors.
- (g) The Final Examination of the Institute of Quantity Surveyors.

The following awards give exemption from the subjects of **Law and/or Economics of Industry at the Part I Examination:**

- (h) H.N.C. and H.N.D. in Building provided that specified subjects are included.
- (i) Graduate membership of the British Institute of Management attained through its membership examinations (Parts I and II).
- (j) First degrees of universities in the United Kingdom in which Law and/or Economics are subjects in the final examination.

The following awards give the holder exemption from the subject of **Estimating only at the Final Part I Examination:**

- (k) The H.N.D. or H.N.C. in Building provided that it includes the subject of Estimating.
- (l) The Associateship Examination of the Institute of Building Estimators.

The only exemption available at the **Final Part II Examination** is that Graduate membership of the British Institute of Management attained through its membership examinations (Parts I and II) exempts from Paper II (General).

COURSES OF DIRECT PREPARATION

Courses of direct preparation for the Institute's examinations are provided at the following establishments:

Coatbridge Technical College, Lanarkshire: A.I.O.B. (part-time).

Dundee Technical College: A.I.O.B. (part-time and full-time).

Northern Polytechnic: A.I.O.B. (3 years full-time).

Tottenham Technical College: A.I.O.B. (4 years sandwich).

The Building Surveyors' Institute

(founded 1952)

186/187, Temple Chambers, Temple Avenue, London, E.C.4

The Institute is mainly concerned with Building Surveyors employed in the offices of building and civil engineering contractors, builders, the direct labour departments of local authorities and industrial concerns. Membership is also open to Building Surveyors in local and central government and to full-time members of staff

in colleges of further education; it is not open to surveyors for whom other associations already exist.

(i) CORPORATE MEMBERS

Fellow (F.Bldg.S.I.). Candidates must be over 35 and be employed as a Chief Building Surveyor or in a similar position; they must have passed the required examinations or be exempted by direct instruction of the Council of the Institute.

Associate (A.Bldg.S.I.). Candidates must be existing Students or Licentiates.

Licentiate (L.Bldg.S.I.). The standard of general education required for entry to the Licentiate examination and Licentiate-ship is that required for admission to H.N.D. and H.N.C. in Construction courses and to C.G.L.I. Construction Technician's Certificate courses.

(ii) NON-CORPORATE MEMBERS

Student membership is compulsory for all candidates for the Licentiate examination. There is no prescribed standard of general education but candidates must satisfy the Institute that their education is such that they may profit from a course of study.

Probationer. This grade is reserved for young students beginning their studies. The minimum entry age is 16 and they become Students at the age of 18.

PROFESSIONAL EXAMINATIONS

Entry to membership by examination is open only to candidates under 35. Applicants over 35 may be admitted to Licentiate Membership on a combination of technical training and practical ability. The examinations are in two parts, the first for **Licentiate Membership** and the second for **Associate Membership**. Each examination is conducted in divisions for Building Surveyors and Construction Technicians, Architectural Technicians and Local Authority Building Surveyors respectively.

EXEMPTIONS FROM THE PROFESSIONAL EXAMINATIONS

Licentiate Examination. Exemption may be granted to candidates holding the H.N.D. or H.N.C. Holders of the Construction Technician's Certificate may be exempted from the written examination, subject to an oral examination and the submission of a practical examination project.

Associate Examination. Exemptions are granted only in respect of university degrees in Building or recognised equivalent degrees.

**The Institute of Clerks of Work of Great Britain
Incorporated**

Liverpool House, 15-17, Eldon Street, London, E.C.2

Fellow (F.I.C.W.). Members who have acted as Clerks of Works for not less than 20 years and have been Members of the Institute for not less than 15 years and have rendered outstanding service to the Institute and the profession may be elected Fellows.

Certificated Honorary Members are persons who have passed the Part II examination but are not employed as Clerks of Works.

Member (M.I.C.W.). Candidates must be not less than 28, be employed as Clerks of Works and have passed the Part II examination. Clerks of Works not less than 35 may also be elected.

Associate. Candidates must have passed the Part I examination or hold an O.N.C. or a First Class Certificate from the Worshipful Company of Carpenters in Sanitation and Building Construction. Clerks of Works not less than 35 may also be elected.

HONORARY MEMBERSHIP

The Institute may elect Honorary Fellows, Honorary Members and Honorary Subscribing Members.

PROFESSIONAL EXAMINATIONS

The Institute conducts examinations for candidates who wish to become members and to qualify for its Diploma. The examination is in two parts. Candidates who pass **Part I (Preliminary)** may become Associates; those passing **Part II (Final)** obtain the **Diploma** of the Institute and may become Members of the Institute if they are already employed as Clerks of Works or Certificated Honorary Members if not so employed.

Candidates for Part I must be not less than 25. Candidates for Part II must be not less than 28, have worked at a skilled trade in the building industry for not less than five years and have had supervisory experience as Clerks of Works, Assistant Clerks of Works or Builders' Foremen.

The Association of Building Technicians

156, Waterloo Road, London, S.E.1

The Association of Building Technicians is a trade union for architects, surveyors, etc. It does not conduct examinations for membership, but in order to encourage technical training it runs

an examination for Clerks of Works, which is open to members and non-members alike; success in the examination does not involve membership of the Association.

Clerk of Works Diploma. All candidates must have had at least ten years' approved experience as skilled building operatives or supervisory technicians; five years must have been spent on building sites. The examination consists of an oral examination and written papers in the following subjects:

Building Construction; Building Materials; Quantities and Schedules; Drainage and Services; Site Practice and Surveying.

The Society of Architectural and Associated Technicians 1, Codicote Road, Welwyn, Hertfordshire

The Society is an Associated Society of the Royal Institute of British Architects, with whose help and under whose auspices it was established early in 1965. The scope of activity of an architectural technician is roughly technical investigation, the preparation of technical information, survey work, the preparation of presentation and production drawings and schedules, obtaining and checking quotations and prices, contract and office administration, site meetings and inspections of work. The Society exists to develop a common basis of technician training as an important step towards a building industry in which each sector is fully intelligible to all the others.

Until it has developed its own examination structure, the Society is basing admission to membership on the following levels:

Member. H.N.C. or H.N.D. with two endorsement subjects at H.N.C. level.

Student. O.N.C. or O.N.D. in Building.

Probationer. Four 'O' level G.C.E. passes in mathematics, English, science and a free subject, preferably art or mechanical drawing.

The Institute of Building Estimators Ltd. 10, Cromwell Place, London, S.W.7

Fellow (F.I.B.E.).

Associate (A.I.B.E.).

Graduate (Grad.I.B.E.). Graduate members are those who have passed the Final Examination.

Student. Candidates for the examinations must be registered students.

PROFESSIONAL EXAMINATIONS

The Institute conducts the following professional examinations:

Intermediate Professional Examination.

Final Professional Examination.

UNIVERSITY DEGREES IN BUILDING SCIENCE AND TECHNOLOGY

Birmingham College of Advanced Technology (proposed University of Aston). **B.Sc.:** 4 years. (Building, Building Economics and Measurement). Candidates should have two 'A' level G.C.E. passes, one in Mathematics and one in Physics, Chemistry, Economics or Geography.

Bristol College of Science and Technology (proposed Bath University of Technology). **B.Sc.:** 4 years. (Building Technology). Candidates should have two 'A' level G.C.E. passes, one of which must be in Pure and Applied Mathematics or another mathematical subject.

Heriot-Watt College (proposed Heriot-Watt University). **B.Sc.:** 4 years. (Building). Candidates should have two 'A' level G.C.E. passes, including Pure and Applied Mathematics.

University of Liverpool. **B.Eng.:** 3 years. (Building Science). Candidates should have two or three 'A' level G.C.E. passes, including Mathematics and Physics.

University of Manchester. **B.Sc.:** 3 years. (Building). Candidates should have three 'A' level G.C.E. passes, including Physics and Chemistry.

Welsh College of Advanced Technology. **B.Eng.(Tech.):** 4 years. (Building Technology). Candidates should have two 'A' level G.C.E. passes, including one in a mathematical subject.

DIPLOMAS IN TECHNOLOGY, C.N.A.A. DEGREES

(i) BUILDING

Four-year sandwich courses leading to the **Dip.Tech. in Building** and in **Building Economics and Measurement** were offered at the Birmingham College of Advanced Technology. These courses will now lead to the **B.Sc.** degree of the proposed University of Aston in Birmingham.

The four-year sandwich course in Building at Brighton College of Technology will now lead to the **B.Sc.** degree of the Council for National Academic Awards.

(ii) SURVEYING

Four-year sandwich courses for the **Dip.Tech. in Quantity Surveying** were offered at Brighton College of Technology and Sheffield College of Commerce and Technology; they will now lead to the **B.Sc.** degree of the C.N.A.A.

A four-year sandwich course for the **Dip.Tech. in Estate and General Surveying** was offered at the Sheffield College of Commerce and Technology; it will now lead to the **B.Sc.** degree of the C.N.A.A.

NATIONAL DIPLOMAS AND CERTIFICATES

The Higher National Diploma in Building. Candidates must usually have passed the G.C.E. with an appropriate subject at 'A' level and three other subjects at 'O' level, or hold an O.N.C. or O.N.D., or have passed a college entrance examination. Courses are offered at the following establishments:

- Bolton Institute of Technology: 3 years sandwich.
- Bristol Technical College: 3 years sandwich.
- Brixton School of Building: 4 years sandwich.
- Lanchester College of Technology, Coventry: 3 years sandwich.
- Mid-Essex Technical College: 3 years full-time.
- North Gloucestershire Technical College: 2 years full-time.
- Ewell County Technical College: 4 years sandwich.
- Leeds College of Technology: 3 years full-time.
- Liverpool College of Building: 3 years sandwich.
- Medway College of Technology: 3 years full-time.
- Nottingham and District Technical College: 3 years sandwich.
- Oxford College of Technology: 3 years sandwich.
- Sheffield College of Technology (General Building): 3 years sandwich.
- Sheffield College of Technology (Structural Engineering): 3 years sandwich.
- Southampton College of Technology (Construction): 3 years full-time.
- Stoke-on-Trent College of Building: 3 years sandwich.
- Tottenham Technical College: 4 years sandwich.
- Willesden Technical College: 2 years full-time.

The Higher National Certificate in Building (General and Administration) is awarded after two-year part-time courses. Candidates must have an O.N.C. in Building or an O.N.C. in Engineering or a C.G.L.I. Full Technological Certificate or, in

certain circumstances, the G.C.E. with 'A' level passes in appropriate subjects, together with supplementary studies.

The course includes building construction and detailing, quantity surveying and measurement of builders' work, site administration, materials and testing, building technology, building law and economics of industry.

The Ordinary National Diploma in Building is awarded after a two-year full-time course. Candidates enter at the age of 16+ and should have 'O' level G.C.E. passes in mathematics, a science subject, English and one other subject.

The course includes building technology, building practice, land surveying, science, liberal studies and workshop practice.

The Ordinary National Certificate in Construction, which is to replace the O.N.C. in Building, will be awarded after a two-year part-time course. Candidates enter at the age of 16+ and should have 'O' level G.C.E. or C.S.E. grade 1 passes in at least four subjects, including mathematics, an appropriate science subject and two other subjects, one of which requires a facility in written English, or have satisfactorily completed the General Course in Construction, or have an equivalent qualification.

The course includes construction technology, science, mathematics, elements of surveying and construction drawing, materials and structures, elementary accounting and office routines and general studies.

COLLEGE DIPLOMAS AND ASSOCIATESHIPS

The following colleges offer courses leading to diplomas or associateships:

Heriot-Watt College, Edinburgh: Associateship (now B.Sc.).

Nottingham and District Technical College: College Diploma in Building (4 years sandwich); College Diploma in Environmental Hygiene (3 years sandwich).

Wigan and District Mining and Technical College: College Diploma in Building and Structural Engineering (4 years sandwich).

AWARDS OF CITY AND GUILDS OF LONDON INSTITUTE

(i) GENERAL BUILDING COURSES

General Course in Construction. (Introduced 1963; C.G.L.I. Course No. 313.) A two-year part-time course for 15-year-old school-leavers and one-year part-time course for 16-year-old school-

leavers. This is a general course in subjects relevant to the construction industry (mathematics, science, construction processes and materials, and construction drawing) for school-leavers who show promise of ability to become technicians; the course is intended to provide a period in which colleges can decide whether students are better fitted to take a National Certificate course or a Construction Technician's Certificate course. An examination is conducted in each of the four subjects of the course; successful candidates reach a Pass or Credit in each.

Construction Technician's Certificate. (Introduced September 1964; C.G.L.I. Course No. 314.) A four-year part-time course designed to train technical and office staff for the construction industry; the approach is more practical than that offered in National Certificate courses. The examination is in two Parts, the first of which is taken at the end of the second year; a *Record of Success* is issued to students who pass Part I. Part II will be taken at the end of the fourth year and the results will be classified as Pass or First Class Pass. Students may be admitted to the course straight from school, or after completing the first year of the General Course in Construction, or after completing the General Course in Construction with passes in construction processes and materials and in construction drawing or on the basis of suitable G.C.E. 'O' level passes.

General Foremanship Studies. (C.G.L.I. Course No. 98.) A two-year part-time course for candidates who already have some supervisory experience in the construction industry and who wish to improve their knowledge of the administrative and technical principles underlying the successful execution of the duties of a general foreman. The syllabus includes the elements of supervision, industrial history, site administration and control, site organisation and method, and personnel administration. Candidates should have either the O.N.C. or a Full Technological Certificate or have completed a special preparatory course.

(ii) CRAFT COURSES

The building craft schemes of the Institute, which are followed in the main by building craft apprentices, provide three main stages of certification:

Craft Certificate

Advanced Craft Certificate

Full Technological Certificate.

Students who have obtained the **Full Technological Certificate (F.T.C.)**, which may not be awarded before they are 21, may

proceed to a course leading either to **General Foremanship Studies** or to an advanced course in building or other advanced technical studies.

Apprentices must be not less than 16 at the beginning of their apprenticeship. Until the end of the school year in which he reaches the age of 18 an apprentice must attend approved technical classes for two half-days or one whole day a week and is required to study for the Craft Certificate examination in his craft. The normal period of indentured apprenticeship is now four years. Upon successful completion of the apprenticeship, apprentices receive the **Apprentice's Completion Certificate** of the National Joint Apprenticeship Council of the Building Industry (11, Weymouth Street, London, W.1).

Craft and Advanced Craft Certificates. The following courses lead to the C.G.L.I. Craft and Advanced Craft Certificates and, in some cases, to the Full Technological Certificate:

<u>Subject No.</u>	<u>Subject</u>
80	Carpentry and Joinery
81	Woodcutting Machinist's Work (and Full Technological Certificate)
82	Brickwork
83	Masonry
84	Plasterer's Work
85	Painter's and Decorator's Work (and Full Technological Certificate)
86	Plumber's Work (Ordinary Craft, Final Craft, Advanced Craft)
92	Mastic Asphalt Work (Craft Certificate)
94	Handrailing and Stair Construction (Certificate)
96	Roof Slating, Tiling and Cement
97	Furnace Brickwork (Certificate)

Courses leading to the **Craft Certificate** last three years, part-time, and are intended to meet the basic educational requirements of the apprentice who is likely to become a competent craftsman; courses usually lead on to the Advanced Craft Certificate and, exceptionally, to the Construction Technician's Certificate. Students may enter the first year of the course on completing four years' secondary school education, the second on completing a secondary technical school course and to the third year with G.C.E. 'O' level passes in appropriate subjects. Successful candidates may be awarded either a Pass or a First Class Pass.

Courses leading to the **Advanced Craft Certificate** last two

years, part-time, and are intended to give the able craft apprentice an opportunity to achieve a higher and more comprehensive standard of proficiency and understanding. Courses usually lead on to the F.T.C. Candidates should have an appropriate C.G.L.I. Craft Certificate or an appropriate Craft Certificate of one of the Regional Examining Unions. Successful candidates may be awarded either a Pass or a First Class Pass.

Accelerated Craft Course in Carpentry and Joinery. The Inner London Education Authority School of Building at Brixton and Willesden Technical College provide an accelerated craft course in Carpentry and Joinery for selected candidates of high ability who are indentured apprentices under an Accelerated Craft Training Course scheme, sponsored by the London Master Builders' Association.

Courses leading to the **Full Technological Certificate** last one year, part-time, and are intended to provide a broader technical and educational base than could be obtained from the study of a single craft. Candidates must be at least 21, have appropriate industrial experience and an Advanced Craft Certificate in one of the following: Carpentry and Joinery, Brickwork, Masonry, Plasterer's Work, Plumber's Work, or Roof Slating, Tiling and Cement. The syllabus includes principles of construction, building science, mathematics and craft foremanship studies. The F.T.C. leads on to a Building Crafts Extension course (Courses Nos. 291 and 292), or the General Foremanship Studies course (No. 98) or the Construction Technician's course. Successful results are classified as Pass only.

Building Crafts Extension Courses last one year, part-time, and are intended to provide a link between F.T.C. and H.N.C. courses. Candidates should have the F.T.C. The syllabus includes principles of construction, building science and building mathematics. Successful results are classified as Pass only.

Related City and Guilds of London Institute courses.

<u>Subject No.</u>	<u>Subject</u>
89	Builders' Quantities (Certificate)
90	Welding in relation to Plumber's Work (post-Course No. 86)
91	Structural Engineering (Craft and Advanced Craft Certificates)
93	Concrete Practice (Elementary Certificate)
95	Formwork and Shuttering for Concrete Construction (Certificate)

<u>Subject No.</u>	<u>Subject</u>
99	Roadwork (Certificate)
110	Concrete Technology (Supervisory Level) (for candidates who already have an Advanced Craft Certificate or an O.N.C. or H.N.C. or the Concrete Practice Certificate)
121	Plumbing Design and Quantities (for candidates who have already obtained the Advanced Craft Certificate in Plumber's Work)
288	Structural Detailing
334	Glazing (Craft Certificate)
335	Wall and Floor Tiling (Craft Certificate)

The Institute also conducts examinations for the following awards, which are available at overseas centres only:

<u>Subject No.</u>	<u>Award</u>
306	Ordinary Certificate in Building
307	Higher Certificate in Building
308	Higher Certificate in Civil Engineering
328	Ordinary Technician Diploma in Building and Civil Engineering

AWARDS OF THE REGIONAL EXAMINING UNIONS

(i) EAST MIDLAND EDUCATIONAL UNION

The E.M.E.U. conducts examinations for the H.N.C. in Building, the O.N.C. in Building (Old Scheme) and the O.N.C. in Construction (New Scheme); the last examination for the O.N.C. in Building will be held in 1966. The Union also conducts examinations for the following:

General Course in Construction Certificate.

Craft Certificates equivalent to C.G.L.I. Craft Certificates in Brickwork; Carpentry and Joinery; Painting and Decorating; Plumbing; Woodcutting Machinist's Work.

The Union provides a course leading to the C.G.L.I. Advanced Craft Certificate in Painting and Decorating (C.G.L.I. Course No. 85) and a two-year part-time course in Pipe Welding leading to the C.G.L.I. examinations in Welding and Hard Metal Work for Plumbers (Course No. 90) or to the test for the Certificate in Competency in Welding of the National Joint Industrial Council for the Plumbing Industry or to the test for competency in Welding of the National Joint Industrial Council for Heating, Ventilating and Domestic Engineers.

(ii) UNION OF EDUCATIONAL INSTITUTIONS

The U.E.I. conducts examinations for the H.N.C. in Building, the O.N.C. in Building (Old Scheme) and the O.N.C. in Construction (New Scheme). The Union's Building Craft courses are designed to fit in with the general pattern of the corresponding courses of the C.G.L.I.; the Union's Craft Certificate is alternative and equivalent to the C.G.L.I.'s Craft Certificate and qualifies candidates for admission to Advanced Craft courses. The Union's courses are as follows:

Construction Technician's Certificate.**General Course in Construction Certificate.**

Brickwork: Craft Certificate and C.G.L.I. Advanced Craft Certificate.

Carpentry and Joinery: Craft Certificate and C.G.L.I. Advanced Craft Certificate.

Masonry: Craft Certificate and C.G.L.I. Advanced Craft Certificate.

Painting and Decorating: Craft Certificate.

Plasterer's Work: Craft Certificate and C.G.L.I. Advanced Craft Certificate.

Shopfitting: Union Certificate for candidates who have already obtained a Craft Certificate in Carpentry and Joinery.

Woodcutting Machinist's Work: Craft Certificate and Advanced Craft Certificate.

(iii) UNION OF LANCASHIRE AND CHESHIRE INSTITUTES

The U.L.C.I. conducts examinations for the H.N.C. in Building, the O.N.C. in Building (Old Scheme) and the O.N.C. in Construction (New Scheme). The Union's Craft Certificates are alternative and equivalent to those of the C.G.L.I. The Union's courses are as follows:

Construction Technician's Certificate.**General Course in Construction Certificate.**

Brickwork: Craft Certificate and C.G.L.I. Advanced Craft Certificate.

Carpentry and Joinery: Craft Certificate and C.G.L.I. Advanced Craft Certificate.

Gas Fitter's Course: Craft Certificate and C.G.L.I. Advanced Craft Certificate.

Painters, Decorators and Sign Writers: Craft Certificate and C.G.L.I. Advanced Craft Certificate.

Plasterer's Course: Craft Certificate and C.G.L.I.
Advanced Craft Certificate.

Plumber's Course: Craft Certificate and C.G.L.I.
Advanced Craft Certificate.

Woodcutting Machinist's Course: Craft Certificate and
C.G.L.I. Advanced Craft Certificate.

(iv) NORTHERN COUNTIES TECHNICAL EXAMINATIONS COUNCIL

The N.C.T.E.C.'s courses are as follows (Craft Certificates are alternative and equivalent to those of the C.G.L.I.):

General Course in Construction Certificate.

Construction Technician's Certificate.

Brickwork: Craft Certificate and C.G.L.I. Advanced
Craft Certificate.

Carpentry and Joinery: Craft Certificate and C.G.L.I.
Advanced Craft Certificate.

Gas Fitting: Craft Certificate.

Painting and Decorating: Craft Certificate and C.G.L.I.
Advanced Craft Certificate.

Plumbing: Craft Certificate and C.G.L.I. Advanced
Craft Certificate.

OTHER QUALIFICATIONS

THE WELSH JOINT EDUCATION COMMITTEE

The W.J.E.C. offers a course leading to the O.N.C. in Building (Old Scheme) and to the O.N.C. in Construction (New Scheme) and courses in building crafts leading to the equivalent of the C.G.L.I.'s Craft Certificate. The Committee's courses are as follows:

General Course in Construction Certificate.

Brickwork: Craft Certificate.

Carpentry and Joinery: Craft Certificate.

Painting and Decorating: 1st year examination only.

Plasterer's Course: 1st year examination only.

Plumber's Course: Craft Certificate.

YORKSHIRE COUNCIL FOR FURTHER EDUCATION

The Council conducts examinations for the O.N.C. in Building (Old Scheme) and the O.N.C. in Construction (New Scheme) and for the General Course in Construction Certificate.

BUILDING SOCIETIES

The Building Societies Institute

6, Cavendish Place, London, W.1

(i) PROFESSIONAL MEMBERSHIP

Fellow (F.B.S.). Fellows are senior members of the Institute.

Associate (A.B.S.). Associates are those members of the Institute who have passed the Final examination (*see below*) and who, being not less than 21 and employed by a Building Society, have been elected to Associateship.

(ii) NON-PROFESSIONAL MEMBERSHIP

Registered Students must be at least 16 and have obtained from the Institute an Admission Certificate stating that they have satisfied the Council as to their educational qualifications. Applicants must have G.C.E. (or the equivalent) with either:

- (i) passes at 'O' level in four subjects, including English and Mathematics;
- (ii) one pass at 'A' level and two passes at 'O' level, the subjects to include English and Mathematics;
- (iii) 'A' level passes in English or English Literature and Mathematics.

Ordinary Member. Studentship is a temporary class of membership and may not be held for more than six years. At the end of six years students may be transferred to Ordinary Membership if they do not satisfy the Institute as to their progress in the examinations.

EXAMINATIONS

The Intermediate Examination. The subjects of the examination are English, general principles of English or Scots Law, book-keeping and economics. Candidates must be not less than 17 and have been granted an Admission Certificate. Exemption may be granted in respect of degrees and the final certificates of certain professional associations; partial exemption may be granted in respect of G.C.E. 'A' level, the intermediate examinations of certain professional associations, the O.N.C. or H.N.C. in Business Studies or the Scottish Senior Commercial Certificate.

The Final Examination. The subjects of the examination are accounting, economics, building society law and practice, housing

and planning, building society administration and either property law or law of property in Scotland or income tax or statistics. Candidates must be members of the Institute who have passed or been exempted from the Intermediate examination.

CATERING

Hotel and Catering Institute
24, Portman Square, London, W.1

Membership (M.H.C.I.) is granted to students who hold one of the following:

National Diploma in Hotel Keeping and Catering

Associateship Diploma of Battersea College of Advanced Technology

Diploma of the Scottish Hotel School

or who have passed the Intermediate and Final examinations of the Hotel and Catering Institute after a two- or three-year full-time or four-year sandwich course at a college. In all cases Membership is granted after a minimum period of two years' practical experience in the industry. A printed certificate is given to successful candidates.

From 1964 candidates for Membership must hold also a City and Guilds Certificate in Cookery for Hotels and Catering Establishments. There are no minimum educational requirements for entry to the Institute's courses.

The Institute also has other grades of Membership: **Fellow, Graduate, Student.**

COURSES OF INSTRUCTION

The following Colleges offer courses leading to M.H.C.I.:

Birmingham College of Food and Domestic Arts (3 years full-time); Bournemouth Municipal College of Commerce and Technology (2 years full-time then 2 years sandwich); South-West Essex Technical College (3 years full-time); Herefordshire Technical College (3 years full-time); Borough Polytechnic (3 years full-time); Ealing Technical College (2 or 3 years full-time; 4 years sandwich); Hendon College of Technology (4 years sandwich); Highbury Technical College, Portsmouth (2 years full-time);

Hollings College, Manchester; North Staffordshire College of Technology (3 years full-time); Wolverhampton and Staffordshire College of Technology (3 years full-time).

The Institute awards the following Certificates:

Certificate in Hotel Book-keeping and Reception. This certificate is taken after a one-year full-time course or after part-time study. Candidates must be at least 17 years old and must have three G.C.E. 'O' level passes in certain subjects. The syllabus includes business practice and accounts, typing and hotel organisation. Colleges offering courses leading to the certificates are:

Birmingham College of Food and Domestic Arts; Blackpool Technical College and School of Art; Bournemouth Municipal College of Technology and Commerce; College of Further Education, Derbyshire; North Gloucestershire Technical College; Ealing Technical College; Langside College; Hendon College of Technology; Herefordshire Technical College; Huddersfield College of Technology; College of Technology, Leeds; Plymouth College of Housecraft; The Hotel and Catering College, Co. Antrim; Highbury Technical College, Portsmouth; Cornwall Technical College; College of Further Education, Solihull; South Devon Technical College; Weston-super-Mare Technical College.

Certificate in Waiting. This is a practical qualification with no academic entry requirements, but candidates must have completed a suitable course, full- or part-time. The examination includes restaurant organisation, basic cookery method, service of food and drinks and accounting, as well as a practical test in serving a meal. Many technical colleges run courses leading to this qualification.

Certificates in Nutrition and Hygiene. These certificates may be taken after either full-time or part-time study.

UNIVERSITY DEGREE AND DIPLOMA

(i) DEGREE

Battersea C.A.T. B.Sc. Ordinary in Hotel and Catering Administration: 4-year course. Entry requirements: 3 'A' level passes preferred.

(ii) DIPLOMA

Associateship Diploma of the Battersea College of Advanced Technology. This qualification was of degree standard and was

taken after a four-year sandwich course. Candidates must have obtained G.C.E. passes in five subjects, including English Language. The Diploma gave exemption from the examination requirements for the M.H.C.I. The course has been superseded by the B.Sc. degree course.

NATIONAL DIPLOMAS

The National Diploma is awarded to students who successfully complete an approved three-year full-time course or a sandwich course. The courses include the study of the theory and practice of trade cookery, kitchen and restaurant operation, reception, office management, maintenance, engineering, accountancy, economics and law. Practical tests form part of the final examinations and the courses are designed to give initial training to students aiming at management and supervisory posts in the industry. The Diploma gives exemption from the examination requirements for the M.H.C.I.

For admission to a National Diploma course students must hold the G.C.E. with five passes at 'O' level in certain subjects.

The following Colleges offer courses for the National Diploma in Hotel Keeping and Catering:

<u>College</u>	<u>Duration</u>
Birmingham College of Food and Domestic Arts	3 years full-time
Blackpool Technical College	3 years full-time
Bournemouth Municipal College of Technology and Commerce	2 years full-time then
Brighton Technical College	2 years sandwich
South Devon Technical College	3 years full-time
North Gloucestershire Technical College	3 years full-time
Huddersfield College of Technology	3 years full-time
Leeds College of Technology	3 years full-time
Liverpool College of Crafts and Catering	3 years full-time
Westminster Technical College	3 years full-time
Hollings College for the Food and Fashion Industry, Manchester	3 years full-time
Ealing Technical College	4 years sandwich
Hendon College of Technology	4 years sandwich
Highbury Technical College, Portsmouth	3 years full-time

COLLEGE DIPLOMAS

Some colleges offer their own **diploma and certificate courses** and these grant limited exemption from the examinations of some professional bodies. Entry requirements vary and full details of these and the courses themselves may be obtained from the principals of the colleges, which are listed below:

<u>College</u>	<u>Duration</u>	<u>Award</u>
Birmingham College of Food and Domestic Arts	3 years full-time	College Diploma
Bournemouth Municipal College of Technology and Commerce	2 years full-time and 2 years part-time	ditto
	2 years full-time	College Certificate
Cornwall Technical College	2 years full-time	College Diploma
Huddersfield College of Technology	2 years full-time	College Certificate
Leeds College of Technology	2 years full-time	College Diploma in Hotel and Catering Subjects
Leicester Domestic Science College	2 years full-time	College Diploma in Institutional and Catering Management
College for the Distributive Trades	2 years full-time	College Certificate and Institute of Meat Diploma
	1 year full-time	College Certificate and Institute of Certified Grocers
Westminster Technical College	2 years full-time	College Diploma in Restaurant Operation
Ealing Technical College	3 years full-time	Hotel and Catering Operations
	4 years sandwich	ditto
Hendon College of Technology	2 years full-time	College Diploma in General Catering
Wolverhampton and Staffordshire College of Technology	3 years full-time	College Diploma

Diploma of the Scottish Hotel School (Glasgow, S.W.2).

This is a degree level qualification taken after a three-year full-time course. The minimum entry requirements are two Higher Grade and three Ordinary Grade passes in the S.C.E., including English and French. The Diploma gives exemption from the examination requirements for the M.H.C.I.

CITY AND GUILDS OF LONDON INSTITUTE CERTIFICATES

The C.G.L.I. Certificates are practical qualifications, taken at technical colleges by full- and part-time students. Sometimes they form part of the Intermediate examinations for students aiming at a fuller qualification, for example M.H.C.I.

Examinations are held in the following subjects:

- Basic Cookery for the Catering Industry (New Scheme 147).
- Preliminary Trade Cookery (Old Scheme 147).
- Catering Trades Basic Training Course (150).
- Cookery for Hotels and Catering Establishments (151).
- Advanced Cookery for Hotels and Restaurants (152).

EXAMINATIONS OF THE REGIONAL EXAMINING UNIONS

(i) EAST MIDLAND EDUCATIONAL UNION

Large-scale Cookery: Advanced Grade. This examination is intended to provide for the needs of cooks in catering establishments and to lead to the C.G.L.I. examination in Cookery for Hotels and Catering Establishments (151).

(ii) NORTHERN COUNTIES TECHNICAL EXAMINATIONS COUNCIL

Large-scale Cookery. This is a two-year part-time course providing introductory training for those working in industrial or hospital kitchens. The standard is lower than that of the C.G.L.I. Certificate 150.

(iii) UNION OF LANCASHIRE AND CHESHIRE INSTITUTES

The Institute offers **Certificate Examinations** in the following subjects:

- Catering Administration.
- General Catering.
- Hotel and Boarding House Catering Services.
- Licensed Trade Catering.
- Restaurant Service.

SCOTTISH QUALIFICATIONS

(The Diploma of the Scottish Hotel School is described above.)

Scottish Technical and Domestic Science Colleges offer a wide variety of courses leading to College Diplomas and Certificates, City and Guilds of London Institute Certificates and other qualifications. The bias of these courses, however, is toward institutional and domestic catering rather than toward hotel qualifications—although hotel management is often part of the course. Because of this bias Scottish catering qualifications are covered in the

Section on Domestic Science and Institutional Management (*see* page 616).

OTHER EXAMINATIONS

- (i) EXAMINATIONS OF THE ROYAL SOCIETY OF HEALTH: 90, Buckingham Palace Road, London, S.W.1.

Certificate in Nutrition in Relation to Catering and Cooking.

This is taken after part-time study and is intended for food supervisors, hospital catering officers, managers and others working in large-scale catering.

Diploma in Nutrition in Relation to Catering and Cooking. This, taken after part-time study, is an advanced examination for people working in large-scale catering.

- (ii) QUALIFICATIONS AWARDED BY THE NATIONAL TRADE DEVELOPMENT ASSOCIATION: 42, Portman Square, London, W.1.

The Licensed Trade Diploma is taken at the end of the Licensed House Training Courses, which are part-time, held at a number of centres and designed for licensees, their staff and aspiring entrants to the trade. The period of instruction is of at least 80 hours and the syllabus covers brewing, cellar management, cooperage, bottling, bar dispensing, catering, records, law, wines and spirits and hygiene. A written examination is held at the end of the course. The Diploma is awarded with Honours, Credit and as a simple Pass.

The Licensed Trade Catering Diploma is taken after the Licensed Trade Catering Course, which is part-time, held at a number of centres, and designed for licensees and their wives. Weekly instruction is arranged either on one afternoon for six months or two afternoons for three months. The syllabus covers kitchen routine, sandwiches and snacks, pastry and sweets, main meals, beverages, menu planning and dining-room service. Examination is by written and practical tests. The Diploma is awarded at Honours, Credit and Pass standard.

- (iii) NAUTICAL COOKERY

Higher Cook's Certificate—Leith Nautical College. This is taken after a full-time course.

Higher Cookery Certificate—Glasgow School of Nautical Cookery. This is taken after a block-release course.

Ministry of Transport Certificate of Competency as a Cook. This is taken after a full-time course at the Leith Nautical

College; Robert Gordon's Technical College, Aberdeen; Grimsby College of Further Education; Liverpool Nautical Catering College; London School of Nautical Cookery (London, E.1); National Sea Training School of Nautical Cookery (Cardiff, Glasgow, Hull and South Shields).

Certificate of the Hotel School of the Westminster Technical College. This is taken after a two-year full-time course; students follow the course for Hotel Chefs or Restaurant Operation. Normal age of entry is 15 to 17 years. There are no minimum educational requirements.

CERAMICS

Institute of Ceramics Ltd.

(founded 1955)

Federation House, Stoke-on-Trent, Staffordshire

Fellow (F.I.Ceram.). Fellows are at least 32 years of age and have passed the Fellowship examination or been granted exemption from it. Associates and Non-Associates must have at least eight years' acceptable experience to be admitted as a candidate. Complete exemption may be gained by Associates of eight years' acceptable experience with established reputations as ceramicists, or who have made contributions to ceramic science or practice. Non-Associates may also be admitted to Fellowship provided they have acceptable qualifications (in ceramics, science or engineering), have acceptable responsible experience in ceramics (eight or twelve years) and can produce evidence of ceramic work of special merit, contribution to ceramic work or practice, or an established reputation as a ceramicist.

Honorary Fellows are persons of distinction. The number of Honorary Fellows at one time is limited to twelve.

Associate (A.I.Ceram.). Candidates must be 25 years of age. Licentiates with five years' satisfactory experience may enter for the Associateship examination. Non-Licentiate candidates must have a good general education and knowledge of Chemistry, Physics or Engineering (to Intermediate level) and five years' satisfactory experience. Licentiates are granted exemption if they have obtained an honours degree in ceramics or have obtained

another degree or qualification of lower standard but can produce evidence of ceramic work of sufficient merit. Exemption is also granted to Licentiates who have made contributions to ceramic science or practice with six years' experience or who have had seven years' responsible experience, or who have obtained a degree in Physics, Chemistry or Engineering and have had five years' acceptable experience. Non-Licentiates with similar qualifications may be admitted if they have an acceptable degree of experience.

Licentiate (L.I.Ceram.). Candidates must be at least 21 years of age and have passed the Licentiateship examination or been granted exemption from it (complete or partial). The Institute requires evidence of certain educational achievements before a candidate may sit for the examination. Otherwise the candidate is required to sit a qualifying examination.

EXAMINATIONS

To date syllabuses for the Licentiateship examination only have been published. Entrance to other grades has been on the basis of external examinations.

The Licentiateship Examination consists of Ceramics I, Technology Part I (Pottery, Refractories or Heavy Clays) and two subsidiary papers. These are all taken by O.N.C. holders or candidates with 'A' levels in certain subjects.

Exemption is granted from the two subsidiary papers to holders of H.N.C. or H.N.D. in certain subjects.

Complete exemption is granted to candidates with three years' acceptable experience in ceramic science or practice who (i) have obtained a U.K. degree in ceramics or the diploma in ceramics of the North Staffordshire Technical College (oral examination or interview), (ii) are graduates in physics, chemistry or engineering or holders of equivalent qualifications and who have done ceramic work of sufficient merit (oral examination or interview), (iii) are holders of a Manager's Certificate of Ceramics of the North Staffordshire Technical College who can produce evidence of ceramic work of sufficient merit (oral examination or interview).

Exemption is also granted to holders of the Under-Manager's Certificate who have done ceramic work of sufficient merit, have completed satisfactory engineering or science courses and have four years' practical experience. Graduates of the Honours Ceramics Course of North Staffordshire Technical College must produce evidence of satisfactory knowledge of Engineering or Physics and Chemistry and produce evidence of work of sufficient merit in ceramics. Five years' satisfactory experience is required.

Institute of Clay Technology

7, Chesterfield Gardens, Curzon Street, London, W.1

The Institute is not a qualifying body and the various grades of membership are open to persons engaged in or interested in the clayworking industry.

UNIVERSITY DEGREES AND DIPLOMA**(i) FIRST DEGREES**

Honours degree courses, with course requirements and duration as shown, are offered at the following universities. For details of higher and other degrees refer to entries for individual universities in Part 4.

Leeds. B.Sc. Honours in Ceramics: 3 or 4 years. 'A' level passes in Physics and Chemistry.

Sheffield. B.Sc.Tech. in Ceramics with Refractories Technology: 3 or 4 years. 3 'A' level passes including Physics and Chemistry.

Strathclyde. B.Sc. Honours in Ceramics: 4 years. 2 'A' level passes including Pure and Applied Mathematics required.

(ii) DIPLOMA

University of Leeds: Postgraduate Diploma in Ceramics. 1-year course.

(iii) DEGREE OF THE C.N.A.A.

North Staffordshire College of Technology. B.Sc. in Ceramic Technology: 4-year sandwich course. Course requirements: G.C.E. in 5 subjects including Physics and Chemistry at 'A' level or Good O.N.C.

COLLEGE DIPLOMAS

North Staffordshire College of Technology: Diploma in Ceramics. 3-year course. 'O' level passes, Physics and Chemistry required.

Manager's Diplomas (Fire Ceramics, Vitreous Enamelling or Heavy Clay Ware). G.C.E. 'O' level pass in Chemistry required.

**CITY AND GUILDS OF LONDON INSTITUTE
EXAMINATION**

The C.G.L.I. conducts the examination for the Kiln Burner's Certificate (Subject No. 146).

CHEMISTRY

The Royal Institute of Chemistry

30, Russell Square, London, W.C.1

Fellow (F.R.I.C.). Fellows must have at least five years' responsible approved experience since being admitted as an Associate (or since being qualified for admission). Non-Associates who do not possess the necessary academic qualification but who have made outstanding contributions to chemistry or the advancement of the profession might be elected to Fellowship.

Associate (A.R.I.C.). Requirements are Graduate Membership or exemption from its entry requirements, and two years' approved experience.

Licentiate (L.R.I.C.). This grade is intended for chemists who do not succeed in becoming Graduate Members of the Institute but who have the equivalent of a good pass degree in Chemistry. The requirements are met either by a degree including chemistry as a main subject, Part I of the Grad.R.I.C. examination together with approved practical examination, or approved post-H.N.C. or H.N.D. course in applied chemistry. A number of technical colleges provide courses for the L.R.I.C.

Graduate Membership (Grad.R.I.C.). This grade represents an academic qualification equivalent to a good honours degree in Chemistry. Candidates must have passed or been exempted from the Graduate Membership examination.

Student Members are required to show evidence of general education (normally by certain passes in G.C.E. or S.C.E.) and have obtained 'A' level passes or equivalent in Chemistry.

EXAMINATIONS

The Grad.R.I.C. Examination is in two parts. Before taking Part I the candidate must have passed an approved course of study for 'A' level in Chemistry, and passed in Physics and Mathematics at 'A' level.

Exemption from Part I of the examination is granted on a subject-for-subject basis to graduates in biochemistry or applied chemistry. H.N.C. or H.N.D. holders may obtain exemption on adequate performance in their examination, and having obtained required ancillary passes. Other exempted classes are: graduates with chemistry as one of their main subjects; candidates who have passed Part I of B.Sc. (Special) in Chemistry at London, with

ancillary subject; Dip.Tech. graduates in Applied Chemistry; General Honours graduates with chemistry as main subject (first or upper second class honours required).

Exemption from Part II of the examination is obtained by graduates with first or second class honours degrees in chemistry, Diplomas in Technology in Chemistry or Applied Chemistry, degrees in other science subjects where chemistry is taken at pass degree level.

Partial exemption is granted to holders of certain other degrees in chemistry; candidates may then take a special examination.

The Institute also awards **postgraduate** and **research diplomas**. The postgraduate diplomas are awarded on examination in special branches of Applied Chemistry; the research diplomas are available to Graduates, Associates or Fellows who carry out research work under prescribed conditions. They are of Ph.D. level.

UNIVERSITY DEGREES AND DIPLOMAS

(i) DEGREES

The universities offering Honours degree courses in Chemistry are listed below. Details of higher and other degrees in chemistry will be found under the entries for individual universities given in Part 4. The normal course requirement is three 'A' level passes, invariably including chemistry and often physics.

Aberdeen. B.Sc.: 4 years. 2 'A' level passes including Pure and Applied Mathematics and Physics or Chemistry.

Belfast. B.Sc.: 3 or 4 years. 'A' level passes in Physics and Chemistry.

Birmingham. B.Sc.: 3 years. 3 'A' level passes including Physics and Chemistry.

Bristol. B.Sc.: 3 years. 3 'A' level passes including Physics and Chemistry.

Cambridge. B.A.: 3 years.

Durham. B.Sc.: 3 years. 3 'A' level passes including Chemistry.

East Anglia. B.Sc.: 3 years. 2 'A' level passes including Chemistry.

Edinburgh. B.Sc.: 4 years. 'A' level passes in Physics, Chemistry, Pure and Applied Mathematics.

Essex. B.A.: 3 years. 3 'A' level passes including Physics and Chemistry.

Exeter. B.Sc.: 3 years. 3 'A' level passes including Chemistry.

Glasgow. B.Sc.: 4 years. 'A' level passes in Physics, Chemistry, Pure and Applied Mathematics.

Hull. B.Sc.: 3 years. 3 'A' level passes including Chemistry.

Keele. B.A.: 4 years. 2 'A' level passes.

Kent. B.Sc.: 3 years. 3 'A' level passes including Chemistry and Physics.

Lancaster. B.A.: 3-year course in which Chemistry is taken as major subject. Candidates require 2 'A' level passes.

Leeds. B.Sc.: 4-year courses in Chemistry, Colour Chemistry or Dyeing, Textile Chemistry and Agricultural Chemistry. Candidates require either 2 or 3 'A' level passes depending on which course they take and its duration. All candidates require 'A' level Chemistry.

Leicester. B.Sc.: 3 years. 3 'A' level passes including Chemistry.

Liverpool. B.Sc.: 3 or 4 years (depending on 'A' level performance). 3 'A' level passes including Chemistry and Physics.

London (Bedford, Birkbeck, Imperial, King's, Queen Elizabeth, Queen Mary, Royal Holloway, University College, Westfield, Northern Polytechnic, Sir John Cass College, Woolwich Polytechnic, West Ham College of Technology). B.Sc.: 3-year courses. All require 3 'A' level passes including Chemistry and Physics. At Bedford, Royal Holloway, Westfield and West Ham there is an alternative scheme where the third subject may be Biology, Zoology, Geology or Botany. Physics or Mathematics is required at 'O' level.

Special Honours degree courses are also available at Brighton College of Technology; The Polytechnic, Regent Street; Oxford College of Technology; Paisley College of Technology.

Manchester. B.Sc.: In the faculty of science a 3-year course. 3 'A' level passes including Chemistry and Physics. In the faculty of technology 3-year courses in Polymer Chemistry and Textile Chemistry. 3 'A' level passes including Physics and Chemistry. In Chemistry of Colouring Matters 3 'A' level passes including Chemistry are required.

Newcastle. B.Sc.: 3 or 4 years depending on 'A' levels obtained. For 3-year course 3 'A' levels including Chemistry and Physics are required.

Nottingham. B.Sc.: 3 or 4 years. For 3-year course 3 'A' level passes in science, including Chemistry, are required. For 4-year course 2 'A' level passes are required.

Oxford. B.A.: 3 years.

Reading. B.Sc.: 3 years. 3 'A' level passes including Chemistry and Physics.

St. Andrews. B.Sc.: 4 years. 2 'A' levels including Chemistry.

Sheffield. B.Sc.: 3 years. 3 'A' level passes including Chemistry.

Southampton. B.Sc.: 3 years. 3 'A' level passes including Chemistry.

Sussex. B.Sc.: 3 years. (Chemistry as major subject.) 2 'A' level passes in Chemistry and Mathematics.

Wales (Aberystwyth, Bangor, Cardiff, Swansea). B.Sc.: 3 years. 3 'A' level passes including Chemistry.

Warwick. B.Sc.: 3 years. 2 'A' level passes (3 preferred) including Chemistry.

York. B.A.: 3 years. 3 'A' level passes including Chemistry.

(ii) FORMER DIP. TECH. COURSES AND DEGREES OF THE NEW UNIVERSITIES

Honours degree courses of the new universities are offered at the following institutions. Four-year courses are normally sandwich; three-year course full-time. Good O.N.C. or O.N.D. passes are normally accepted in lieu of the 'A' level passes indicated.

Battersea College of Technology. B.Sc.: 3 or 4 years. 3 'A' levels including Physics and Chemistry, or Chemistry.

Birmingham C.A.T. B.Sc.: 3 or 4 years. 2 'A' level passes required.

Bradford Institute of Technology. B.Tech. in Industrial Chemistry: 4 years. 2 'A' level passes including Chemistry required.

Bristol College of Science and Technology. B.Sc.: 4 years. 2 'A' levels including Chemistry required.

Brunel College. B.Tech.: 4 years. 2 'A' level passes including Chemistry.

Chelsea College of Science and Technology. B.Sc.: 3 years. 3 'A' levels including Physics and Chemistry required.

Heriot-Watt College. B.Sc. in Applied Chemistry: 4 years. 2 'A' levels including Pure and Applied Mathematics.

Loughborough. B.Sc. or B.Tech. in Industrial Chemistry or Chemistry and Management: 3 or 4 years. 2 'A' level passes including Chemistry required.

Northampton C.A.T. B.Sc. in Industrial Chemistry: 4 years. 2 'A' level passes including Chemistry.

Salford. B.Sc. in Applied Chemistry: 3 or 4 years. 2 'A' level passes including Chemistry required.

Strathclyde. B.Sc. in Applied Chemistry or Chemistry: 4 years. 2 'A' level passes including Applied Mathematics.

Welsh C.A.T. B.Sc. (Tech.): 4 years. 2 'A' level passes including Chemistry required.

(iii) DEGREES OF THE C.N.A.A.

Honours degree courses of the C.N.A.A. (four-year sandwich courses) are now offered at the following colleges. Entry requirements are 'A' level passes in Chemistry, Mathematics and preferably Physics and two 'O' level passes, one of which must be English. Alternatively, passes at 'A' level in Chemistry and Physics or Mathematics and three 'O' level passes including English, or a good O.N.C. or O.N.D. will be accepted.

Borough Polytechnic (Chemical Technology).

Brighton College of Technology (Applied Chemistry).

Hatfield College of Technology (Applied Chemistry).

Huddersfield College of Technology (Chemical Technology).

Lanchester College of Technology, Coventry (Applied Chemistry): $4\frac{1}{2}$ years sandwich.

Liverpool College of Technology (Applied Chemistry).

Rutherford College of Technology (Applied Chemistry).

Woolwich Polytechnic (Applied Chemistry).

(iv) DIPLOMAS AND CERTIFICATE

University of Cambridge: Postgraduate Certificate in Chemistry. 1-year course.

University of London (Imperial College): Diplomas (D.I.C.) in Chemical Technology or Analytical Chemistry. 1-year course.

University of Sussex: Diploma in Organo-Metallic Chemistry. 1-year postgraduate course.

NATIONAL CERTIFICATES AND DIPLOMAS

Part-time courses for National Diplomas and Certificates in Chemistry and Applied Chemistry are held at a number of colleges. For entry to **Ordinary National Certificate (O.N.C.)** courses full-time education to 16 years or a preparatory part-time course to 16 years is required to commence a three-year course. 'O' level passes in Mathematics, Physics, Chemistry and English will admit to a two-year course.

Higher National Certificate (H.N.C.) courses are two years (part-time) in length and are open to holders of O.N.C. or 'A' level passes in Physics or Chemistry and one other subject.

Higher National Diploma (H.N.D.) courses are two years full-time or three years sandwich and are open to holders of O.N.C. or an 'A' level pass in Chemistry and four other 'O' level passes

and Mathematics and Physics at the O.N.C. penultimate year level.

H.N.D. courses in Chemistry are conducted at the following colleges:

College	Duration
Bristol College of Science and Technology	2 years full-time
Brighton College of Technology	2 years full-time
High Wycombe College of Further Education	2 years full-time
Carlett Park Central College of Further Education (Cheshire)	2 years full-time
South-East Essex College of Technology	3 years sandwich
Grimsby College of Further Education	3 years sandwich
Huddersfield College of Technology	3 years sandwich
Medway College of Technology, Kent	2 years full-time
Widnes College of Further Education	3 years sandwich
Borough Polytechnic, London	2 years full-time
Enfield College of Technology	3 years sandwich
Hendon College of Technology	3 years sandwich
Leicester College of Technology	2 years full-time
John Dalton College, Manchester	2 years full-time
Rutherford College	2 years full-time
Nottingham and District Technical College	3 years sandwich
Portsmouth College of Technology	3 years sandwich
Harris College of Further Education, Preston	3 years sandwich
St. Helens Technical College	3 years sandwich
Sheffield College of Technology	3 years sandwich
Slough College	3 years sandwich
Chance Technical College, Smethwick	2 years full-time
Stockport College of Further Education	3 years sandwich
North Staffordshire College of Technology	2 years full-time
Kingston College of Technology, Surrey	2 years full-time
Wolverhampton and Staffordshire College of Technology	2 years full-time
Flintshire Technical College	3 years sandwich
Glamorgan College of Technology	2 years full-time
Swansea College of Technology	3 years sandwich

COLLEGE DIPLOMAS AND ASSOCIATESHIPS

Birmingham C.A.T.: 3-year full-time course. Associateship in Chemistry (this is now a degree course).

Bradford Institute of Technology: 3- and 4-year course (full-time). College Diploma in Colour Chemistry and Dyeing Materials Science and Technology (this is now a degree course).

Loughborough College of Technology: 3-year full-time course. College Diploma in Industrial Chemistry (this is now a degree course).

Derby and District College of Technology: 2-year sandwich course. College Diploma in Dry Cleaning Technology.

Constantine College of Technology, Middlesbrough: 3-year sandwich course. College Higher Diploma.

Nottingham and District Technical College: 4-year full-time course. College Diploma in Dyeing and Finishing.

Stoke-on-Trent College of Technology: 3-year full-time course. College Associateship.

Heriot-Watt College, Edinburgh: Associateship in Applied Chemistry (this is now a degree course).

Royal College of Science and Technology, Glasgow: Associateship courses in Chemistry and in Applied Chemistry.

CITY AND GUILDS OF LONDON INSTITUTE EXAMINATIONS

The C.G.L.I. conducts the examinations for the following awards:

Chemical Technician's Certificate (Subject No. 315).

Chemical Plant Operation (Subject No. 24) (Ordinary and Advanced).

EXAMINATIONS OF THE REGIONAL EXAMINING UNIONS

Various Unions conduct the following examinations:

Higher National Certificate and Ordinary National Certificate in Chemistry.

Chemical Technician's Course.

Chemical Industries Course.

Chemical Plant Operation.

CHILD CARE

Child Care Officers investigate applications for children to be received into care and advise and help parents who are in trouble about their children.

Training normally takes the form of an initial qualification in social science and a further professional course in the particular techniques of child care work. There are special integrated courses for older candidates and for those with experience. All students must complete a period of practical work in a residential children's home.

Candidates who have completed these courses qualify for the **Letter of Recognition of the Central Council for the Training of Child Care Officers** (Home Office, London, S.W.1).

PROFESSIONAL TRAINING

Professional training may be taken in one of five ways:

(i) ONE-YEAR UNIVERSITY COURSES

Candidates for these courses must hold a university qualification in social science—a degree, diploma or certificate (*see* Social Science) which included or was followed by practical training. The minimum age is, in most cases, 21; at Liverpool it is 20 and a few students are admitted who do not hold a previous university qualification. The syllabus usually includes child psychology, law, child health and criminology as well as general social science subjects.

Courses are run by the following universities:

Birmingham: Diploma in Social Work.

Bristol: Certificate in Applied Social Studies.

Edinburgh: Certificate in Child Care.

Leicester: Certificate in Applied Social Studies.

Liverpool: Diploma in Applied Social Studies.

London (London School of Economics): Diploma in Applied Social Studies.

Newcastle: Certificate in Applied Social Studies.

Southampton: Diploma in Applied Social Studies.

St. Andrews (Queen's College): Certificate in Applied Social Studies.

Wales (Cardiff and Swansea): Diploma in Applied Social Studies.

(ii) 17-MONTH UNIVERSITY COURSES FOR GRADUATES

These courses, which are offered by the universities listed below, are open to graduates in any subject who are unable to take two-year postgraduate training or who prefer a course which combines practical and theoretical work. The courses are normally shared with other social work training, especially probation, and the syllabus covers the same ground as the one-year courses outlined above.

Exeter: Certificate in Social Work.

Liverpool: Diploma in Applied Social Studies.

Manchester: Diploma in Advanced Studies (for graduates whose degree course has involved study of modern society — law, history, philosophy, psychology, sociology, economics).

Nottingham: Diploma in Applied Social Studies.

Oxford: Diploma in Public and Social Administration,

(iii) ONE-YEAR COURSES WITH SPECIAL ENTRANCE REQUIREMENTS FOR EXPERIENCED STUDENTS

National Institute for Social Work Training (Mary Ward House, 5-7, Tavistock Place, London, W.C.1). Candidates for this course must be child care or other welfare officers with at least five years' experience. The minimum age is 30. The course covers fieldwork, theory and administration.

University of Newcastle, Department of Adult Education. This course is for child care officers with at least five years' experience but no specific qualifications. Entrants must normally be between 27 and 45. The course is practical and theoretical.

University of Sheffield, Extramural Department. This course is for mature students with relevant training and experience, for example, in teaching, health visiting and in ancillary medical professions. The minimum age is 25. The course is practical and theoretical.

(iv) TWO-YEAR COURSES FOR STUDENTS OVER 25

These courses are for mature students who are over 25 and under 45. They combine social studies with professional training in child care. An assessment is made of the candidate during the course and final examinations are conducted. Courses are conducted by the following establishments:

City of Birmingham College of Commerce; Cardiff College of Food Technology and College of Commerce; Moray House College of Education, Edinburgh, 8; Ipswich Civic College; University of Keele, Department of Extramural Studies; Lincoln Adult Education Centre; the North-Western Polytechnic; University of Manchester, Department of Extramural Studies; Plymouth College of Technology; Harris College, Preston; Stevenage College of Further Education.

(v) DEGREE COURSE

Bradford Institute of Technology. B.Sc. in Applied Social Studies (including professional qualification). This is a four-year honours degree course covering all branches of social case work. Candidates must be not less than 18 and have five G.C.E. 'O' level passes and two 'A' level passes or four 'O' level passes and three 'A' level passes. They should also have undertaken some form of social work. Mature candidates who lack G.C.E. qualifications may take a Departmental examination for admission. The course includes practical work during the second, third and fourth years.

HOUSE PARENTS

Certificate in Residential Child Care of the Central Training Council in Child Care. This Certificate is a qualification for house parents and staff in boarding schools for handicapped children, approved schools, remand homes, probation hostels and hostels for working boys and girls.

Courses last 12 months; candidates need no academic qualifications but are expected to have had a good general education. Women must be over 18, men over 21, and candidates under 45 are preferred. Married couples may take the course together.

The courses include practical training, the study of children and adolescents and of the family unit. The following courses are available:

General Courses

Ipswich Civic College; Convent of the Helpers of the Holy Souls (for Roman Catholic and Anglican Nuns), London, N.W.1; The North-Western Polytechnic; Cardiff Technical College; Lamorbey Park Adult Education Centre, Sidcup; The Martineau Teachers' Centre, Birmingham; National Children's Home, London, N.5; Dr. Barnardo's Homes Staff Training Centre, Woodford Bridge, Essex; York Centre of Further Education.

Specialised courses for those wishing to work with adolescents

The North-Western Polytechnic; Leicester University (Vaughan College); Josephine Butler Memorial House (for women), Liverpool; The Selly Oak Colleges, Birmingham; Ruskin College, Oxford.

CHIROPODY

(See note on State Registration, page 790).

The Society of Chiropodists

8, Wimpole Street, London, W.1

Fellow (F.Ch.S.). Fellows are established practitioners who have passed an additional examination at a higher level than the Membership examination. This consists of practical work on cases of special difficulty, of a further examination in medical and

surgical aspects of chiropody and of a thesis based on original work or thought.

Associate (A.Ch.S.). Associates are those students who have completed their training and passed the examinations but are under the age of 21. They become **Members (M.Ch.S.)** on attaining the age of 21.

EXAMINATIONS

There are three examinations. The first consists of papers on Biology, Chemistry and Physics; the second of papers and oral tests in Anatomy, Physiology, Podology, and a practical examination in Chiropody; and the Final of papers and oral tests in Medicine, Surgery, Podology, Therapeutics and a practical examination in Chiropody. For entry to a course in Chiropody a student must be at least 17 years old and have passed either:

- (a) G.C.E. 'O' level in four subjects preferably including English Language or Literature, a science subject and mathematics or a second science subject.
- (b) S.C.E. Ordinary Grade in four subjects.

COURSES

Courses approved by the Society are offered at:

Chelsea School of Chiropody, 250, King's Road, Chelsea, S.W.3.

London Foot Hospital, School of Chiropody, 33, Fitzroy Square, London, W.1.

Birmingham General Dispensary, School of Chiropody, 41, Newhall Street, Birmingham, 3.

Manchester Foot Hospital, School of Chiropody, Anson Road, Victoria Park, Manchester, 14.

Salford School of Chiropody, Salford Technical College, 28/29, The Crescent, Salford, 5.

Edinburgh Foot Clinic and School of Chiropody, 81, Newington Road, Edinburgh.

Glasgow Foot Clinics and School of Chiropody, 22, Windsor Terrace, Glasgow, N.W., and 48, Cumberland Street, Glasgow, C.5.

Cardiff School of Chiropody, Llandaff Technical College, Cardiff.

Teacher's Certificate of the Society of Chiropodists. This qualification is for members of the Society and consists of two written papers and oral tests on the principles of teaching and theory of chiropody.

The Institute of Chiropodists

59, Gloucester Place, London, W.1

Diploma of Licentiate in Chiropody is granted to students who have completed their training at the above centres and passed the examinations. Since the Institute was constituted by the amalgamation of a number of regional associations of Chiropodists some licentiates were admitted on the grounds of having been members of their previous professional association.

Diploma of Fellowship (F.Inst.Ch.) is granted to members of the Institute of at least five years' standing who pass an advanced examination set by the Institute.

Honorary Fellow (Hon.F.Inst.Ch.). Honorary Fellows are elected to the Institute by the Executive Committee. They can be Licentiates or Associates of the Institute and are elected on merit.

Associate of the Institute of Chiropodists (A.Ch.). This class of membership, to which recruits are no longer accepted, was available for some time after the formation of the Institute to chiropodists who had been in practice for at least five years. Chiropodists who have this qualification only would now be found in private practice.

THE SOCIETY OF CHIROPODISTS

8 Wimpole Street, London, W.1

The Society is the examining body in Chiropody approved by the Chiropodists Board for the purpose of State Registration under the Professions Supplementary to Medicine Act, 1960, which is a condition of employment in the National Health Service.

Copies of the illustrated booklet "The Profession of Chiropody" and a list of the recognised schools offering a comprehensive three-year full-time course in chiropody may be obtained from the Secretary of the Society. The course includes tuition in Anatomy, Physiology, Medicine and Surgery and other medical subjects which have a bearing on Chiropody. All the schools have full facilities for practical tuition and students are afforded opportunities of seeing and treating all the varied types of cases which come within the province of the Chiropodist.

The minimum age for entry to the course is 17 years. Students should have obtained at least four passes at "O" level in the G.C.E.

Diploma in Higher Chiropody Therapy of the Institute of Chiropodists (H.Ch.D.). This Diploma awarded by the Institute covers surgical chiropody and the use in chiropody of physiotherapy principles. Three kinds of people may hold this Diploma:

- (a) Members who trained before the formation of the Institute and reorganisation of training, and whose initial course covered this subject.
- (b) Licentiate members of at least one year's standing who have passed an examination in this work.
- (c) Licentiate members of one year's standing who are also members of either the Chartered Society of Physiotherapists or the Physiotherapists' Association.

THE CHURCHES

(Including Theological qualifications)

The Anglican Communion

ORDINATION

Candidates for Ordination under the age of 25 years are required to obtain a university degree, wherever possible, and then to take a two-year course at a theological college. The course leads to the General Ordination Examination or its equivalent. Candidates are often encouraged to read for a degree in theology unless there is a particular reason why they should read another subject.

Students who are not qualified to read for a degree may take one of the following recognised courses:

- (a) the Associateship course of King's College, University of London (A.K.C.);
- (b) the Associateship course of the London College of Divinity (A.L.C.D.);
- (c) the Kelham course, which covers the General Ordination Examination syllabus;
- (d) the one-year pre-theological course at the Bernard Gilpin Society, Durham, followed by a three-year course;
- (e) the two-year course at Brasted followed by two years at a theological college.

Candidates taking courses (c), (d) and (e) must pass the General Ordination Examination at their theological colleges; candidates for courses (d) and (e) are specially selected by the Central Advisory Council for the Ministry and must be approved after their preliminary year of training.

Candidates between the ages of 25 and 30. Graduates are required to take a two-year course at a theological college and to pass the General Ordination Examination. Non-graduates are required to take a three-year course and to pass the General Ordination Examination.

Candidates between the ages of 30 and 40 are required to take a two-year course at a theological college and to pass the General Ordination Examination.

Candidates over 40 take a course devised to meet their individual needs.

THE QUALIFICATIONS

Diploma of Associateship of King's College, London (A.K.C.). The Diploma is conferred after a three-year course (full-time) at King's College. Entrants must have five G.C.E. passes, including one at 'A' level. The syllabus includes Biblical studies (with Greek), doctrine, worship, ethics, church history and comparative religions. Students may combine the Diploma course with that for the London B.D. degree; their course then lasts four years.

Associateship of the London College of Divinity (Green Lane, Northwood, Middlesex) **(A.L.C.D.).** The Associateship is conferred after a three-year full-time course, for which the entry requirements are five G.C.E. passes, including one at 'A' level. The syllabus covers Biblical studies (including Greek), doctrine, worship, church history, Christian morals and the philosophy of religion. Graduates may take the course in two years. Students may combine the course with that for the London B.D. degree; their course then lasts four years.

The General Ordination Examination is taken after a course in a theological college and must be passed by all candidates for ordination in the Anglican Church. The examination covers holy scripture, doctrine, church history, worship and ethics. Older students may present essays instead of taking papers in these subjects. Candidates who have obtained the A.K.C. or the A.L.C.D. are exempted from the examination.

Candidates are normally admitted to a theological college course after selection by the Central Advisory Council for the Ministry

(C.A.C.T.M.) (9, Tufton Street, London, S.W.1). Intending students under the age of 25 are normally expected to have passed G.C.E. 'O' level in five subjects.

The following Theological Colleges offer courses leading to the General Ordination Examination:

St. Aidan's College, Birkenhead, Cheshire; The Queen's College, Somerset Road, Edgbaston, Birmingham, 15; Clifton Theological College, Stoke House, Stoke Bishop, Bristol, 9; Tyndale Hall, 133, Pembroke Road, Clifton, Bristol, 8; Ridley Hall, Cambridge; Westcott House, Cambridge; Bishop's College, Cheshunt, Hertfordshire; The Theological College, Chichester, Sussex; Cuddesden College, Oxford; St. Chad's College, Durham; St. John's College, Durham; Cranmer Hall, Durham; The Theological College, Ely, Cambridgeshire; The House of the Sacred Mission, Kelham, Newark, Nottinghamshire; The Theological College, Lichfield, Staffordshire; The Bishop's Hostel, Lincoln; King's College, University of London; The London College of Divinity, Green Lane, Northwood, Middlesex; Oak Hill College, Southgate, London, N.14; The College of the Resurrection, Mirfield, Yorkshire; Ripon Hall, Oxford; St. Stephen's House, Oxford; Wycliffe Hall, Oxford; The Theological College, Salisbury, Wiltshire; The Theological College, Wells, Somerset; The Theological College, Rosebery Crescent, Edinburgh, 12; St. David's College, Lampeter, Cardiganshire; St. Michael's College, Llandaff, near Cardiff; St. Deiniol's Library, Hawarden, Chester; Rochester Theological College, The Deanery, Rochester, Kent; Southwark Ordination College, 9, College Green, Worcester.

OTHER CHURCH OF ENGLAND QUALIFICATIONS

Lambeth Diploma in Theology, which is suitable as an additional Divinity teaching qualification for graduates or qualified teachers, is open to men and women baptised in any denomination. The examination may be taken after three years' full-time study at an approved college or a longer period of part-time study and is equivalent in standard to an Honours degree in theology.

CENTRAL READERS' BOARD EXAMINATIONS

General Readers' Examination. This is the normal qualification for lay readers and is taken after part-time study covering the Bible, elementary church history, prayer book doctrine and practice.

The Archbishop's Diploma for Readers. Readers who pass the General Examination and take a continuation course successfully may be recommended for the Archbishop's Diploma.

Inter-Diocesan Certificate of the Council for Women's Ministry in the Church. This is the recognised qualification for trained women workers in the Church and is normally taken after a two-year course of training.

Addresses

Lambeth Diploma in Theology: Miss A. E. Fryer, 27, Eaton Court, Guildford, Surrey.

Central Readers' Board, 45, Great Peter Street, London, S.W.1.

Council for Women's Ministry in the Church, 9, Tufton Street, London, S.W.1.

THE CHURCH IN WALES

The Church in Wales does not confer distinctive qualifications on its ministers.

The normal course of training lasts five years, three years' study for a degree and two years' study at a theological college. The period of training is shortened to four years for candidates who spend all their time at St. David's College, Lampeter, reading for a pass degree and a Diploma in Theology concurrently. Older candidates may take a shorter form of training.

THE EPISCOPAL CHURCH IN SCOTLAND

Candidates for ordination in the Episcopal Church of Scotland take a course at the Theological College, Rosebery Crescent, Edinburgh, 12. The course lasts three years for non-graduates and two years for graduates. It is based on the General Ordination Examination of the Church of England and the examination under the direction of the Scottish Bishops known as the *Luscombe*. The *Luscombe* consists of papers on Scottish Church History and Scottish Liturgy; it is compulsory for Scottish candidates and optional for others.

Candidates who have passed the General Ordination Examination and the *Luscombe* Examination and have been recommended for ordination by the Principal are awarded the College Testamur.

The College is recognised by the Scottish universities as an extra-mural institution at which Scottish graduates may prepare for the B.D. degree of their own university and it also offers special assistance to students who wish to take the B.D. degree of London University.

The Baptist Union of Great Britain and Ireland

4, Southampton Row, London, W.C.1

Candidates for the Baptist Ministry must be under 40 and have reached a satisfactory level of education. There are two ways into the Baptist Ministry.

(i) TRAINING AT A BAPTIST THEOLOGICAL COLLEGE

The length of the training course varies between three and six years. The colleges work in association with a university and students work for a degree in arts or theology. Candidates for training must obtain prior approval of the Association to which their local church belongs. The colleges are as follows:

Bristol College, Woodland Road, Bristol, 8.

Manchester Northern Baptist College, Brighton Grove, Rusholme, Manchester, 14.

Rawdon College, Leeds, Yorkshire.

Regent's Park College, Oxford.

Spurgeon's College, 189, South Norwood Hill, London, S.E.25.

North Wales Baptist College, Bangor.

South Wales Baptist College, Cardiff.

Baptist Theological College of Scotland, Glasgow.

(ii) EXAMINATIONS PRESCRIBED BY THE BAPTIST UNION

Examination for the List of Probationers (First Examination). The examination is in two parts. For Part 1 candidates must have either the University of London Certificate of Proficiency in Religious Knowledge (with passes in the Old, New and Greek Testaments and Early Church History) or any other university diploma in Biblical knowledge of at least equal standing, provided it is approved by the Ministerial Recognition Committee. Part 2, which is conducted by the Union, consists of papers on Baptist History, Baptist Principles and Homiletics, Pastoral Theology and Christian Worship.

Examination for the List of Ministers (Second Examination). The examination is in two parts. Part 1 consists of papers on English language and literature, Christian Doctrine and Church History to A.D. 313. Part 2 consists of papers on Christian Doctrine, Church History (the Reformation and the rise of the Free Churches) and Christian Ethics; candidates are also required to write an essay and prepare an outline sermon.

Candidates may take the First and Second Examinations as a whole or in two parts; they must complete the First before proceeding to the Second Examination. A correspondence course of instruction is arranged by Wolsey Hall, Oxford.

If they complied with the rules governing Ministerial Recognition, candidates who have passed the First Examination may have their names placed on the List of Probationers. When they pass the Second Examination their names are placed on the List of Ministers and they are given a Diploma.

OTHER BAPTIST UNION QUALIFICATIONS

Certificate in Religious Knowledge. The course is designed to follow on from the Christian Discipleship Correspondence Course for new church members and to lead on to the Baptist Union Diploma. The examination is in two sections. Section A consists of papers on general knowledge of the New Testament, Baptist History and Principles and the Life and Teaching of Jesus Christ. Section B consists of papers on the Old Testament Prophets, history of the English Bible and either Christian Devotion or Christian Stewardship or Christian Citizenship.

Diploma in Religious Knowledge. Candidates must be at least 17 when they take Part I of the examination.

The examination is in three parts, the course for which normally extends over three years. Candidates must complete Parts I and II before going on to Part III. Part I consists of papers on English, general knowledge of the New Testament, St. Mark's Gospel, history of the English Bible and Baptist History and Principles; candidates with G.C.E. 'O' level in English or the Certificate in Religious Knowledge are excused English. Part II consists of papers on the general knowledge of the Old Testament, a book of the Old Testament, the Acts of the Apostles or New Testament Greek I and one of five optional subjects. Part III consists of papers on a selected book of the New Testament, Church History, Christian Doctrine and one of six optional subjects. (Candidates who have a university certificate or diploma in Biblical knowledge or theology may obtain the Diploma by passing in Baptist History and Principles in Part I, one optional subject of Part II and either the whole or part of Part III.)

The Diploma may be awarded 'with Distinction'.

Candidates who wish to qualify for recognition by the Baptist Union as lay preachers or lay pastors must take Worship and Preaching as their optional subject in Part II.

The Congregational Union of England and Wales

Memorial Hall, Farringdon Street, London, E.C.4

(i) TRAINING AT A CONGREGATIONAL THEOLOGICAL COLLEGE

Congregational Ministers (both men and women) are usually trained in the Union's theological colleges. Most students take a qualification of the university to which their college is attached, a degree in theology, a diploma or a certificate. The length of the training course varies between four and six years. Candidates for training must be recommended by their local Minister and by the County Provincial and Ministerial Committees of their area. The colleges are as follows:

Cheshunt College, Cambridge.

Northern Congregational College, Whalley Range, Manchester, 16.

Mansfield College, Oxford.

New College, 527, Finchley Road, London, N.W.3.

Paton Congregational College, Derby Road, Nottingham.

Western College, Cotham, Bristol, 6.

Bala-Bangor Independent College, Bangor.

The Congregational Memorial College, Ffynnone, Swansea.

(ii) EXAMINATIONS PRESCRIBED BY THE CONGREGATIONAL UNION FOR OLDER CANDIDATES

Candidates over the age of 28 may train for the Ministry without going to a theological college, provided they are recommended by a County Union or Association and Provincial Ministerial Committee. The syllabus of the examination for the Roll of Ministers leads to four **Ministerial Examinations**, each taken at the end of a year's study; candidates must take all the examinations within seven years and spend no more than three years on any one examination. Candidates must be supervised by a Congregational Minister or a person appointed by the County Union. On passing the second Ministerial Examination candidates are described as Probationers and may take full- or part-time charge of a church; Probationers are fully qualified and are entered on the Roll of Ministers when they have passed all the examinations, received final approval from their Provincial Ministerial Committees and are giving full-time service in a pastorate.

If, at the end of seven years, a candidate has not passed the Fourth Ministerial examination he may no longer be described as a Probationer but may, if he wishes, be included on the Register of Lay Pastors.

OTHER CONGREGATIONAL UNION QUALIFICATIONS

Lay Pastor's Examination for entry to the Register of Lay Pastors. Candidates for the Register of Lay Pastors must be recommended by their County Unions to the Congregational Union and must take the Lay Pastor's Examination. A person authorised by the County Union prepares a written report on a candidate's conduct of worship. The examination may include interviews, written papers, a thesis and essays. The syllabus for the examination consists of a sermon or address, papers on general knowledge of the Bible, selected psalms and St. Luke's Gospel, Christian Doctrine, Pastoral Care and Congregationalism, and command of English.

Lay Preacher's Certificate (course prepared jointly with the Presbyterian Church of England). The course for the Certificate is intended to give a basic training for Lay Preachers. The course for the Lay Preacher's Diploma (*see below*) is more advanced and more specialised. The Certificate course covers three years' study (in units of one year) and candidates must complete each year in order. Part I (first year) consists of papers on the Bible, Worship and Church History or Theology; Part II (second year) consists of papers on the Bible, Worship and Denominational History and Principles (plus a written sermon); Part III (third year) consists of papers on the Bible, Worship and Church and Theology (plus a preached sermon).

Lay Preacher's Diploma (course prepared jointly with the Presbyterian Church of England). The course, which covers a period of 18 months, is a sequel to the Certificate Course and is open only to candidates who have obtained the Certificate. The course is normally conducted by correspondence but, as with the Certificate Course, it may be used as the basis of study under the guidance of a Minister. The examination consists of papers on the Bible and an optional subject (selected from among English Free Church History, Christian Ethics, Christian Worship and the Theology of St. Paul); candidates are also required to preach a sermon, on which a report is submitted to the Lay Preachers' Committee of the Congregational Union.

THE SCOTTISH CONGREGATIONAL CHURCH

Candidates for the ministry in the Scottish Congregational Church are trained at the Scottish Congregational College (29, Hope Terrace, Edinburgh, 9), which shares facilities with the Theological College of the United Free Church of Scotland (*see* page 556).

Intending students must be graduates or have taken a course at a university or another approved institution for not less than two years. They are required to pass a College entrance examination.

The College course lasts three years and candidates who complete it successfully are awarded the College Certificate.

The Methodist Church

1, Central Buildings, Westminster, London, S.W.1

Candidates for the ministry in the Methodist Church start their preparation by obtaining the consent of the Superintendent Minister of the Circuit to which their local churches belong to their becoming Local Preachers. They are then usually on trial for a year, during which they take oral and written examinations in Christian doctrine and Biblical knowledge.

Approved candidates receive theological training at a residential college affiliated to a university. The colleges are as follows:

Didsbury College, Henbury Hill, Bristol (affiliated to the University of Bristol).

Richmond College, Richmond, Surrey (affiliated to the University of London).

Hartley Victoria Methodist College, Alexandra Road South, Alexandra Park, Manchester, 16 (affiliated to the University of Manchester).

Headingley College, Leeds, Yorkshire (affiliated to the University of Leeds).

Handsworth College, Friary Road, Birmingham, 20 (affiliated to the University of Birmingham).

Wesley House, Cambridge (affiliated to the University of Cambridge).

Students may take the appropriate degree of the university to which their college is affiliated; candidates at Richmond College who are not qualified to read for a degree study for the London University Diploma in Theology (*see* page 562).

The only Methodist college which awards its own diploma is Handsworth, Birmingham. The **College Diploma in Theological Studies** is conferred on successful students after a three-year course, covering the Old Testament, the New Testament (with Greek), theology, philosophy, church history and sociology. The Diploma is awarded at three levels, First Class, Second Class and Pass. First Class is of a high standard, requiring an overall average mark of 75%, and is awarded only occasionally.

QUALIFICATIONS AWARDED BY THE METHODIST YOUTH DEPARTMENT
AND THE METHODIST ASSOCIATION OF YOUTH CLUBS

The Methodist Youth Department (2, Chester House, Pages Lane, London, N.10) awards the following Certificates and Diplomas:

Sunday School Teacher's Certificate.

Junior and Inters Leader's Certificate.

Diploma in Christian Education (for experienced teachers and leaders).

M.A.Y.C. Youth Leader's Basic Certificate.

M.A.Y.C. Second Stage Certificate.

M.A.Y.C. Diploma in Christian Leadership (for experienced youth leaders).

The Presbyterian Church of England

86, Tavistock Place, London, W.C.1

Candidates for the ministry in the Presbyterian Church of England must first satisfy their local ministers as to their character and then obtain the approval of their Presbytery and the Central Candidates' Board. All candidates are required to take a three-year course of training at Westminster College, Cambridge, the Theological College of the Presbyterian Church of England.

Candidates under the age of 25 are usually required to be already or to become graduates of an approved university or professional institution. Candidates over 25 who do not possess two G.C.E. 'A' level passes in subjects approved by the College Board of Studies must pass a Preliminary Examination (three papers on the use of English, history and philosophy) before sitting the Entrance Examination, by which all candidates are assessed for admission to the College course. The Board of Studies may amend the two examinations and the College course for candidates over 35.

COURSE OF TRAINING

Each of the three years of the College course leads to an examination. The Intermediate Examination is taken at the end of the first year; the Exit Examination Parts I and II is taken at the end of the second and third years. In addition to their course in theology, students receive comprehensive technical training in the following subjects:

Elocution; sermon construction and criticism; the principles and practice of public worship; application of Biblical studies; the teaching ministry and leadership of group discussions; the minister and the Courts of the Church

the minister and the Church's Mission; personal counselling and sick visiting; psychology and psychiatry; social agencies in the welfare state; the minister's personal life; devotional literature, etc.

Technical training is intended to cover three main areas: the public ministry, the ministry to individuals and the minister's personal life.

Students with the necessary academic qualifications and the approval of the College authorities may read for the Cambridge B.A. in Theology or for a higher degree in Theology, provided they enrol in Fitzwilliam House or one of the Colleges of the University.

OTHER PRESBYTERIAN CHURCH OF ENGLAND QUALIFICATIONS

Lay Preacher's Certificate. The course for the Certificate has been prepared jointly with the Congregational Union (*see* page 548).

Lay Preacher's Diploma. The course for the Diploma has been prepared jointly with the Congregational Union (*see* page 548).

Deaconesses. Candidates for training as Deaconesses must be accepted by the Deaconess Committee. They take a two- or three-year course at the Centre for Training in Christian Mission, Selly Oak, Birmingham; the Centre is at Carey Hall, a United Missionary College for the training of women candidates for service with the Baptist Missionary Society, the London Missionary Society and the Women's Missionary Association of the Presbyterian Church of England. Successful candidates are ordained after completing a course in Bible study, doctrine and social studies and, if required, a period of probation.

Sunday School Teachers. Certificates are awarded to junior and senior Sunday School teachers who complete a course of instruction and pass an examination devised by the Youth Departments of the Presbyterian Church of England, the Baptist Union and the Congregational Union.

The Presbyterian Church of Wales

Candidates for the ministry in the Presbyterian Church of Wales are trained at the United Theological College, Aberystwyth. Students are prepared for the Diploma in Theology and the B.D. degree of the University of Wales; the College is associated with University College, Aberystwyth, for this purpose.

Intending students for the Diploma should have five G.C.E. 'O' level passes (including Greek) or the equivalent or pass a College Entrance Examination. Candidates above the age of 24 may be subject to modified requirements.

The College course for the ministry in the Presbyterian Church of Wales—the College also prepares candidates for the Christian ministry generally—follows the three-year Diploma and B.D. courses. Candidates are examined in the following subjects:

Old Testament language and literature; New Testament language and literature; the history of the Christian Church; Christian doctrine and ethics; the philosophy and the history of religion.

All these subjects must be passed in the first stage of the examination; two in the second stage and another two, also taken in the course of the second year, must be passed in the third stage. In addition, an examination in the Holy Scriptures is set at each stage of the course.

After the three-year course of academic study, candidates spend a fourth year in pastoral training during which instruction is given in psychiatry and elocution, the communication of the Gospel, Christian education, work among youth, contemporary evangelism and pastoral practice.

The Roman Catholic Church

Candidates for the Priesthood in the Roman Catholic Church attend a residential seminary course of at least six years, two years of which is spent in studying Philosophy and four in studying Dogmatic and Normal Theology, Scripture, Church History, Canon Law, Liturgy and Pastoral Theology. No degree is awarded at the end of the course, but candidates have to pass the internal examinations of their seminary. Candidates may *either* train for the secular Priesthood—at one of the following:

St. Edmund's College, Old Hall Green, Ware, Hertfordshire; St. Cuthbert's College, Ushaw, Durham; St. Joseph's College, Upholland, Wigan; St. John's Seminary, Wonersh, Surrey; and Oscott College, Sutton Coldfield, Warwickshire;

or they may train by becoming members of one of the Religious Orders—Jesuit, Dominican or Benedictine—or with St. Joseph's Society for Foreign Missions which trains priests for foreign missionary work.

Usually candidates are required to have a good standard of

education including some knowledge of Latin. Many take a university degree as part of their course—this is usually a normal degree of a British university.

The Dominicans, however, award to their more gifted students a degree proper to their Order, the **Lectorate in Sacred Theology**, which is awarded on the evidence of a thesis.

The normal full **Jesuit** course includes the **Licentiate of Philosophy and of Theology of Gregorian University**, to which the seminary is affiliated.

The Salvation Army

Salvation Army International Headquarters
101, Queen Victoria Street, London, E.C.4

Men and women students are trained for full-time service in the Salvation Army as officers and accredited ministers at the William Booth Memorial Training College (Denmark Hill, London, S.E.5). Certificates are awarded to successful candidates.

Students are known as 'cadets'. Their two-year course at the College is part of a five-year study programme, including a preparatory year of study and two years' post-training studies.

QUALIFICATIONS FOR ADMISSION

Single men and women between 18 and 30 and married couples up to 35 apply for admission through Salvation Army channels and must be recommended locally and nationally.

PERIOD AND SCOPE OF TRAINING

The total period of training lasts five years. The first year consists of pre-College study by candidates. The first nine months of the second year are residential; the next five months consist of supervised pastoral ministry and social service in selected centres throughout the United Kingdom. Cadets then return to the College for a further residential course of seven or eight months, after which they are commissioned as Salvation Army officers. Post-training studies go on for another two years. Officers who have professional qualifications, for instance, in medicine, education or social work, may take advanced studies.

The College conducts a number of **correspondence courses** in Biblical and religious subjects. Some courses are available only to officers, while others may be followed by any member of the Salvation Army. Certificates are awarded to successful candidates.

Music. The Bands Department conducts a correspondence course in basic, intermediate and advanced grades and also in harmony. Successful candidates are awarded certificates of merit.

The Church of Scotland

The Church of Scotland Committee on Education for the Ministry
121, George Street, Edinburgh, 2

(i) THE REGULAR COURSE

Candidates for the regular course of training should have a degree of one of the Scottish universities or of another university whose degrees are recognised by the General Assembly of the Church. They take a course in one of the four Divinity Faculties at Aberdeen (Christ's College), Edinburgh (New College), Glasgow (Trinity College) or St. Andrews (St. Mary's College). Candidates must first receive a Certificate of Approval from the Central Selection Board of the Church and be nominated for the entrance examination by their local Presbytery.

The theological course usually lasts three sessions, the first two being sessions of three terms and the third one of two terms. At the end of the course candidates require an Exit Certificate, which is issued by the Committee on Education for the Ministry on the recommendation of the Central Selection Board, before beginning a period of probation. The minimum requirement for the Exit Certificate is qualification as Licentiate in Theology in one of the Scottish universities. Students may take the examinations of the university with which their colleges are associated for the degree of B.D.

Students may take two years of the theological course at one of the following:

Assembly's College, Belfast (Presbyterian Church of Ireland).

Westminster College, Cambridge (Presbyterian Church of England).

Aberystwyth College (Presbyterian Church of Wales).

The final year should be taken in one of the Faculties listed above.

(ii) THE MODIFIED COURSE

A modified course for men between the ages of 23 and 40 whose educational experience has been more limited is available. Admission to the course is conditional upon the acceptance of the candidate by the Central Selection Board and on his having passed in two subjects on the Higher grade of the University Preliminary

Examination and in one subject on the Ordinary level. The course of training consists of two sessions in a pre-Divinity Course and three sessions in the study of Divinity. Candidates are required to have gained by the end of the second year of the pre-Divinity Course such additional passes in the University Preliminary Examination as will entitle them to a Certificate of Fitness on the terms demanded by the Scottish Universities Entrance Board of candidates of 23 or over, by which they may be admitted to the qualifying course in Divinity on the nomination of a Presbytery.

At the end of the Divinity Course candidates qualify as Licentiates in Theology.

When students have completed their theological course they are taken on trial by a Presbytery and licensed as probationers. At the end of a probationary year candidates are ordained, usually by the Presbytery in which their charge is situated.

The Unitarian and Free Christian Churches

Essex Hall, 1-6, Essex Street, London, W.C.2

Regular candidates for the ministry in the Unitarian and Free Christian Churches take a course of training either at Manchester College, Oxford, or at the Unitarian College (Daisy Bank Road, Manchester, 14). The course at Manchester College lasts three years for graduates and four years for non-graduates and leads either to the Oxford degree of B.D. or to the Oxford Diploma in Theology (*see* page 563).

The Unitarian College, Manchester, offers courses leading to the College Certificate and to degrees of Manchester University in arts or theology and to Manchester University Certificates in Biblical Knowledge or Theology. The courses offered are as follows:

- (a) a five- or six-year course leading to an arts degree followed by a theological course;
- (b) a six-year combined arts degree and theological course;
- (c) a three-year theological course;
- (d) special courses arranged to cater for candidates in special circumstances;
- (e) a one-year probationary course for students not qualified to enter the theological course direct; and
- (f) a four-year part-time General Assembly Students' Course for Lay Pastors in charge of churches in the district.

Candidates for the ministry in **Wales** could formerly take a

course at the Presbyterian College, Carmarthen, which closed in 1963. The Presbyterian Board now sends candidates for training to the School of Theology, University College, Cardiff, where they take either a three-year course for the University of Wales B.D. degree or a three-year course for the University of Wales Diploma in Theology.

Candidates for the ministry of the **Non-subscribing Presbyterian Church of Ireland** are expected to take a degree course at a university recognised for the purpose before taking a course of theological training at Manchester College, Oxford, the Unitarian College, Manchester, or University College, Cardiff.

READING AND EXAMINATION SCHEME FOR LAY PASTORS

Lay Pastors of 28 and over may take a part-time course of instruction. The course extends over four years for non-graduates and three years for graduates, during which examinations are taken annually; candidates must be Lay Pastors in charge of congregations or missions. The course includes instruction in Biblical literature, the history of religion, Christian doctrine, the philosophy of religion, psychology and social service work.

United Free Church of Scotland

11, Newton Place, Glasgow, C.3

The United Free Church of Scotland, whose Ministers are trained at its Theological College (29, Hope Terrace, Edinburgh, 9), co-operates with the Scottish Congregational College for the training of its students. The staff of the two Colleges co-operate in providing a full course of training for students of both denominations. The United Free Church Theological Course is recognised by the four old Scottish universities as qualifying their graduates to take the examinations for the B.D. degree.

The post-school educational preparation required by the United Free Church of Scotland consists of a course of general education at a university and a postgraduate course in theology at the Church's College. The Ministry is open to both men and women. Candidates for the College course must have the approval of their local Presbyteries and pass an Entrance Examination.

The theological course lasts three years. Candidates between the ages of 23 and 40 who have been engaged in other occupations may be allowed to undertake a modified curriculum in arts at the university lasting two years.

UNIVERSITY DEGREES AND DIPLOMAS

(i) FIRST DEGREES

First degree courses in Theology, or including theology, are offered at the following universities. The length of the course and the entry requirements are given in each case.

Aberdeen. M.A. Honours in Biblical Studies: 4 years. Candidates should have two S.C.E. Higher grade passes.

Aberdeen. M.A. Honours in English and Biblical Studies: 4 years. Candidates should have two S.C.E. Higher grade passes.

Birmingham. B.A. Special Honours in Theology: 3 years. Candidates should have three G.C.E. 'A' level passes.

Birmingham. B.A. Combined Honours in English and Theology: 3 years. Candidates should have three G.C.E. 'A' level passes.

Birmingham. B.A. Combined Honours in Philosophy and Theology: 3 years. Candidates should have three G.C.E. 'A' level passes.

Birmingham. B.A. Combined Honours: 3 years. Courses may also include one of the following subjects with Theology:

Archaeology; French; German; Ancient or Modern Greek;

History; Italian; Latin; Mathematics; Music; Physical

Education; Psychology; Russian; and Spanish.

Candidates should have three G.C.E. 'A' level passes.

Bristol. B.A. Honours in Theology: 3 years. Candidates should have two G.C.E. 'A' level passes and Latin or Greek at 'O' level.

Cambridge. B.A. Honours in Theology: 3 years. Candidates should have two G.C.E. 'A' level passes; they should have passes in two languages other than English, an approved science or mathematical subject, one other approved subject and the Use of English.

Durham. B.A. Honours in Theology: 3 years. Candidates should have two G.C.E. 'A' level passes and Latin or Greek at 'O' level.

Edinburgh. B.D. Ordinary in Divinity: 4 years. Candidates should have two S.C.E. Higher grade passes and a knowledge of New Testament Greek before they may be admitted to the second year.

Exeter. B.A. Honours in Theology: 3 years. Candidates should have two G.C.E. 'A' level passes and Latin at 'O' level.

Hull. B.A. Honours in Theology: 3 years. Candidates should have two G.C.E. 'A' level passes, preferably including a foreign language, with Latin or Greek at 'O' level.

Hull. B.A. Honours in Philosophical Theology: 3 years. Candidates should have two G.C.E. 'A' level passes.

Hull. B.A. Joint Honours: 3 years. Courses may include one of the following subjects with Theology:

Drama; English; French; German; Greek; History; and Sociology.

Candidates should have two G.C.E. 'A' level passes.

Leeds. B.A. Honours in Theology: 3 years. Candidates should have two G.C.E. 'A' level passes.

Leeds. B.A. Combined Honours in English and Theology: 3 years. Candidates with three G.C.E. 'A' level passes are preferred.

Leeds. B.A. Combined Honours in Philosophy and Theology: 3 years. Candidates with three G.C.E. 'A' level passes are preferred. Candidates may also take Combined Honours in Theology with Hebrew or Music. Length of course: 3 years. Candidates with three G.C.E. 'A' level passes are preferred.

London. B.D. Honours or Pass (this degree may also be awarded externally): 3 years. Courses are offered at King's College, New College and Richmond College; candidates should have two G.C.E. 'A' level passes. Women candidates for the course at King's College should have three 'A' level passes, including Religious Knowledge, and some knowledge of the Classics.

Manchester. B.A. Honours in Biblical Studies: 3 years. Candidates should have two G.C.E. 'A' level passes, one of which may be Religious Knowledge, and Latin or Greek at 'O' level.

Manchester. B.A.(Theol.) Ordinary: 3 years. Candidates with three G.C.E. 'A' level passes are preferred.

Newcastle. B.A. Honours in Theology: 3 years. Candidates should have two G.C.E. 'A' level passes, with Latin or Greek at 'O' level.

Nottingham. B.A. Honours in Theology: 3 years. Candidates should have two G.C.E. 'A' level passes, with Greek at 'O' level.

Nottingham. B.A. Joint Honours in Philosophy and Theology: 3 years. Candidates should have two G.C.E. 'A' level passes, with Greek at 'O' level.

Oxford. B.A. Honours or Pass in Theology: 3 years. Candidates should have G.C.E. passes in the Use of English, two approved foreign languages including Latin or Greek, an approved mathematical or science subject and another approved subject. Two of the passes should be at 'A' level.

St. Andrews. B.D. Ordinary in Divinity: 4 years. Candidates should have two S.C.E. Higher grade passes.

St. Andrews. B.D. Honours in Divinity: *see* Higher Degrees, page 561.

Sheffield. B.A. Honours in Biblical History and Literature: 3 years. Candidates should have two G.C.E. 'A' level passes, including Religious Knowledge, or Scripture or a foreign language.

Southampton. B.A. Combined Honours: 3 years. The degree may be taken in Theology with Greek, Latin, History or Philosophy. Candidates should have two G.C.E. 'A' level passes.

Sussex. B.A. Honours in Religious Studies: 3 years. Candidates must have two G.C.E. 'A' level passes; when the course is taken as a major subject in the School of European Studies one pass must be in French, German, Greek, Latin or Russian.

Wales (Bangor and Cardiff). B.A. Honours in Biblical Studies: 3 years. Candidates should have two G.C.E. 'A' level passes.

Wales (Bangor). B.A. Joint Honours in Biblical Studies and Philosophy: 3 years. Candidates should have two G.C.E. 'A' level passes, preferably including Religious Knowledge.

St. David's College, Lampeter. B.A. Joint Honours in Theology and Philosophy: 3 years. Candidates should have two G.C.E. 'A' level passes.

St. David's College, Lampeter. B.A. Honours in Theology: 3 years. Candidates should have two G.C.E. 'A' level passes, with Greek at 'O' level.

(ii) HIGHER DEGREES IN THEOLOGY

The higher degrees usually awarded in Theology are those of B.D., M.Th. (Master of Theology) and D.D. (Doctor of Divinity); the degrees of M.A. and Ph.D. may also be conferred.

Aberdeen. B.D.; M.Th. The B.D. degree is taken after a three-year course following a first degree course in arts. The M.Th. degree is taken after at least one year's full-time or at least two years' part-time study or research following a first degree in arts.

Belfast. B.D.; D.D. The Doctor's degree is open to graduates in divinity of at least six years' standing.

Birmingham. B.D.; D.D. The B.D. degree may be conferred on candidates not less than two years after taking an approved first degree. The Doctor's degree may be awarded to candidates five years after taking the B.D. or another second degree.

Cambridge. B.D.; M.Litt. (Master of Letters); **Ph.D.** (Doctor of Philosophy); **D.D.** The degrees of B.D. and D.D. may be conferred on Cambridge graduates only. Candidates for the B.D.

must be of at least five years' standing from admission to the B.A. degree and must submit either a thesis or a published work; candidates for the D.D. must be of at least eight years' standing from B.A. Candidates for the M.Litt. must undertake two years' research and candidates for the Ph.D. three years' research.

Durham. B.D.; D.D.

Edinburgh. M.Theol.; B.D. The degree of M.Theol. may be conferred two years after a first degree and the degree of B.D. three years after a first degree.

Glasgow. B.D.; Ph.D.

Hull. B.D.; D.D. Candidates for the B.D. degree must take or be exempted from a qualifying examination before submitting a thesis. The degree of D.D., which is awarded in respect of published work, is available only to Hull graduates or members of the University staff.

Leeds. M.A.; B.D.; D.D. Candidates may take the degrees of M.A. or B.D. after a postgraduate course of instruction. The degree of D.D. may be conferred on Leeds graduates six years after their first degree.

London. M.Th.; D.D. The degree of M.Th. is open to London B.D.'s with first or second class, division I, honours and to London B.D.'s who graduated with honours in or before 1964. London graduates in other faculties are required to take a qualifying examination before admission; other graduates must have equivalent qualifications or must pass a qualifying examination. The degree is awarded after an examination in any one of six areas of study.

Candidates for the degree of D.D. must have a London B.D. with honours or the M.Th. or the Ph.D. The degree is conferred in respect of published work.

Manchester. M.A.; Ph.D. (Doctor of Philosophy); **D.D.** The degree of D.D. may be conferred on Manchester graduates of four years' standing and on graduates of other universities of six years' standing (provided they have a Master's degree or the equivalent and have spent two years in study or research in Manchester).

Nottingham. B.D.; D.D. The degree of B.D. may be conferred on graduates of approved universities after at least three years' research (two years in the case of candidates who have a higher degree in Theology awarded after research or an examination) who pass a qualifying examination and submit a thesis. Candidates with good honours in Theology or a higher degree in Theology by reason of examination or research may be exempted from the qualifying examination.

The degree of D.D. may be awarded to Nottingham graduates of seven years' standing and to graduates who have been members of the University staff for at least four years in respect of substantial contributions to learning.

Oxford. B.D.; D.D. The degree of B.D. may be awarded to candidates who have passed an examination and taken a course in Christian theology and have submitted a thesis. The qualifying examination is open to Oxford M.A.'s, Oxford B.A.'s and, under certain conditions, to graduates of other universities. Oxford B.A.'s with good honours may be exempted from the qualifying examination.

The degree of D.D. may be conferred on Oxford graduates of some years' standing in respect of a thesis or a published work in a branch of Christian theology.

St. Andrews. B.D.; M.Th. The B.D. Honours degree is post-graduate and may be awarded three years after a first degree in arts or a recognised degree or diploma. The M.Th. degree may be conferred on submission of a thesis.

Wales. B.D.; Ph.D. (Doctor of Philosophy); **D.D.** The degree of B.D. is awarded after a three-year course at one of the associated theological colleges or at University College, Bangor, or University College, Cardiff.

(iii) LAMBETH DEGREES

Since an Act of 1533 the Archbishop of Canterbury has had the power to confer degrees and until the early years of this century examinations were conducted. Examinations have been discontinued and Lambeth degrees (which take their name from Lambeth Palace) are awarded in respect of major contributions to learning; they correspond with certain university higher degrees. The degrees awarded in recent years have been those of M.A., LL.D., D.Litt., Mus.Doc. and D.D.

(iv) CERTIFICATES AND DIPLOMAS

Birmingham. Diploma in Theology: this is a two-year course open to graduates and covering Biblical study, Church history, systematic theology and Christian ethics.

Birmingham. Certificate in Theology: this is a two-year course intended for non-graduates and deals with the methodology and contents of theology. It is a part-time course.

Birmingham. Diploma in Liturgy and Architecture: this

course is offered by the Institute for the Study of Worship and Religious Architecture in the Faculty of Arts.

Birmingham. Diploma in Pastoral Studies: this is a one-year full-time course or two-year part-time course. It includes fieldwork and formal teaching covering the social and psychological aspects of health and the problems and techniques of pastoral care.

Bristol. Certificate in Religious Knowledge: this is a two-year part-time course open to intending and practising teachers including students in the University. The syllabus covers Biblical theory and history.

Cambridge. Diploma and Certificate in Religious Knowledge: this external examination is a test of university standard for teachers, ordinands and others. No entry requirements are set down but the standard is 'that which would normally be reached after at least two years of full-time study beyond G.C.E. "A" levels'. Successful candidates are awarded the Certificate while those who reach a particularly good standard are granted a Diploma.

Durham. Diploma in Theology: the course for this is a two-year postgraduate one, covering the Bible, ecclesiastical history, systematic theology, Christian morals and worship.

Hull. Certificate of Further Studies in Theology: this is intended mainly for external students—scripture teachers in particular. The syllabus covers the Bible, Church history and Christian thought.

Leeds. Diploma in Theology: a three-year full-time course leads to this Diploma, which is a non-graduate course covering the same subjects as the Leeds B.A. in Theology. Greek is studied, but not Hebrew.

London. Diploma in Theology: this may be taken internally (when it is called the Academic Diploma) or externally, by those who have qualified for university entrance. It may also be taken by extramural students who have not qualified for university entrance but have passed in at least three subjects at G.C.E. 'O' level. The Diploma is a test of university standard and is taken by teachers seeking additional qualifications and by ordinands and others. The syllabus covers theology, Church history, including the New Testament and Greek.

London. Certificate of Proficiency and Religious Knowledge: no course is prescribed for this examination which covers the Old and New Testaments in English and two optional subjects. The qualification, useful for teachers, is between G.C.E. 'A' level and the above Diploma in Theology in standard.

London. Diploma in Biblical and Religious Studies: this is a four-year course run by the Extramural Department. Subjects covered include religion and civilisations of the Ancient World and the Old and New Testaments.

Manchester. Certificate in Theology: this is taken after a two- or three-year course. Candidates must pass, or be exempted from, the University Entrance Examination. The course covers theology, comparative religion, Church history, doctrine and ethics.

Manchester. Certificate in Biblical Knowledge: this examination may be taken through the Extramural Department and by external candidates after a one- or two-year course. The examination covers the Old and New Testaments and set books in English.

Newcastle. Diploma and Certificate in Biblical Studies: these courses, designed primarily for teachers, may be taken by full-time study (one year) or part-time (two years). The Diploma course is open to graduates of approved universities, and the Certificate to qualified teachers and others who seem likely to profit by it. The syllabus covers the Old and New Testaments and Christian theology. Greek is studied for the Diploma and may be studied for the Certificate.

Nottingham. Diploma in Religious Education: the University Institute of Education arranges two courses leading to the Diploma: (a) a one-year full-time course for graduates, usually with degrees other than in Theology, who have some years' teaching experience, preferably including religious education; and (b) a three-year part-time course for trained qualified teachers with not less than three years' approved teaching experience, preferably including some practical experience in religious education in schools.

Nottingham. Certificate in Religious Education: the University Institute of Education arranges a two-year part-time course which is usually open to trained qualified teachers with at least three years' approved teaching experience, including preferably some practical experience in religious education in schools.

Nottingham. Certificate in Theological and Educational Studies: awarded jointly by the University and the Paton Congregational College (*see* page 547) after a four-year course, the first of which is spent at Paton College and the three remaining years partly in the University Institute of Education and partly at the College.

Oxford. Diploma in Theology: the one-year course for this

Diploma is open to graduates and is useful for intending teachers. The course covers the New Testament, Christian doctrine and an optional subject.

St. David's College, Lampeter. Licence in Theology (L.Th.): the two-year course for this award is open to graduates of any university. It covers Biblical studies including Greek, Church history, doctrine and worship. Hebrew is optional.

St. David's College, Lampeter. Diploma in Theology: the syllabus for this course is similar to that for the Licence in Theology. The course is two years for graduates and three years for non-graduates.

St. Andrews. Licence in Theology (L.Th.): this is taken after a three-year course open to non-graduates.

Wales (Bangor and Cardiff). Diploma in Theology: the three-year course for this Diploma is open to non-graduates. It covers the same subjects as the B.D. course except that Hebrew is optional.

CLOTHING

The Clothing Institute

Henrietta House, 17/18, Henrietta Street, London, W.C.2

Fellow (Fellowship Diploma) (F.C.I.). The Diploma, which may also be awarded in Bespoke Tailoring and Engineering, may be obtained by an original contribution to the industry, usually evidenced by the submission of a thesis. Candidates must be at least 30 and are expected to have considerable experience in the industry.

Associate (Associateship Diploma) (A.C.I.). The Diploma may also be awarded in Bespoke Tailoring and Engineering. Candidates must complete the Institute's or approved examinations in Clothing Technology or, in the case of more experienced candidates, write a thesis of not less than 10,000 words on a subject approved by the Institute. The approved examinations are the C.G.L.I. Full Technological Certificate in Clothing Technology (Course No. 128) or, up to January 1967, the Full Technological Certificate in Tailors' Cutting and Tailoring, obtained prior to

1958. The minimum age for admission to Associateship is 25 and candidates must have held a responsible post in the industry for at least three years.

The Institute's examinations in Bespoke Tailoring are in course of establishment. In the meantime candidates over 35 will be considered for the Associateship (Bespoke Tailoring) award if they have completed a bespoke tailoring apprenticeship of not less than five years, have been employed in the trade for not less than 15 years and have managed a bespoke tailoring business for not less than five years.

Candidates over 25 will be considered for the Associateship (Engineering) award if they have a degree, H.N.C. or equivalent qualification in mechanical or electrical engineering and have been employed in responsible positions as Clothing Machine Engineers for not less than five years.

Ordinary Member. Anyone who is engaged in or directly concerned with clothing manufacture may be admitted to Ordinary Membership. Candidates for Associateship or Fellowship must be Ordinary Members at the time of applying for a Diploma award.

EXAMINATIONS

The Associateship Examination (introduced 1966). The examination is in two parts, I and II. Candidates for Part I must have passed G.C.E. 'O' level in four different subjects, including English, mathematics or a science subject, or an equivalent examination, or otherwise satisfy the Institute that they have reached an equivalent standard.

Part I will normally be taken at the end of a two- or three-year course of full-time study; older and more experienced candidates might prepare for the examinations by means of part-time courses. Part II should be taken after at least two or three years in the industry, during which they should prepare their chosen subjects by part-time or short full-time courses on advanced aspects of the technology.

Part I will consist of papers on knowledge of materials, design and anatomy, cutting room practice and garment making. Part II will consist of a thesis, papers on production methods and management, design and retail bespoke tailoring, and two subsidiary subjects selected from a list of seven.

Certificate in Sewing Machine Repair and Maintenance. Students who satisfactorily complete a three-year part-time course in Sewing Machine Repair and Maintenance at Shoreditch College for the Clothing Industry will receive a certificate from the Institute.

NATIONAL DIPLOMAS

Diplomas in Art and Design (Dip.A.D.) are awarded in Fashion and Embroidery. Courses are offered at the following establishments:

Fashion

Birmingham College of Art and Crafts; Gloucestershire College of Art; Hornsey College of Art; Kingston-upon-Thames School of Art; Leeds College of Art; Leicester College of Art; Maidstone College of Art; Nottingham College of Art and Crafts; Ravensbourne College of Art and Design, Bromley; St. Martin's School of Art, London.

Embroidery

Goldsmiths' College School of Art, London; Loughborough College of Art; Regional College of Art, Manchester.

Note. The former National Diploma in Design (N.D.D.), with the Intermediate Certificate, was awarded in Dress, Millinery and Embroidery.

COLLEGE DIPLOMAS AND ASSOCIATESHIPS

Designer of the Royal College of Art (Des.R.C.A.) in Fashion Design. Students who pass the final examination in the School of Fashion Design (in dress design and millinery design) are awarded a certificate. If they satisfactorily complete a further nine months working in an approved post in industry or satisfy the Academic Board that they had occupied such a post for nine months before entering the College or that they have had comparable experience of designing, students may apply for a Diploma entitling them to the style of Designer of the Royal College of Art (Des.R.C.A.).

Students who, during their course, do not seem suitable for taking up a post in industry may, on the recommendation of the Professor of Fashion Design, be awarded the Diploma of Associateship of the Royal College of Art (A.R.C.A.).

Candidates for a course at the Royal College of Art must be at least 17 and have G.C.E. 'O' level passes in five subjects (or the equivalent). They should normally have had a preliminary course at an art school and they are required to take an entrance examination.

The Diploma of the Birmingham College of Art School of Dress Design is awarded to students who complete a four-year course in dress design.

The Loughborough College Diploma in Art (D.L.C.A.) is awarded to students who complete a three-year course in design.

The Diploma of Associateship of the Regional College of Art, Manchester (D.A.Manc.) is awarded after a four-year full-time course.

SPECIALIST COLLEGES

The London College of Fashion (formerly Barrett Street Technical College) (20, John Prince's Street, Oxford Street, London, W.1) offers two-year full-time courses for students entering the clothing industry. The minimum age of entry is 16, except for the Clothing Design Course for which the minimum age is 17. For most courses students should have three G.C.E. 'O' level passes, including English. Applicants without G.C.E. are required to take an entrance test. Students are prepared for the examinations of the City and Guilds of London Institute and a College Certificate is awarded to all full-time students who work satisfactorily at all subjects in their course and attend regularly.

Students already working in the industry attend part-time courses for C.G.L.I. examinations and intensive one-year courses in dress-making, tailoring and millinery are arranged for adult students only.

The College has Departments dealing with Design, Clothing (including Furriery), Hairdressing and General and Management Studies.

The Royal School of Needlework (25, Princes Gate, London, S.W.7). **Diploma in Needlework, Embroidery and Design.** This Diploma was awarded until 1961. It was taken after a three-year full-time course at the school and was a qualification for intending teachers of the craft.

The school now runs a two-year full-time apprenticeship course for girls of school-leaving age who wish to train as professional embroideresses, but no longer awards the above Diploma.

The same institution offers an **Award Certificate** to students who complete a course of evening study at the school and pass its examinations. Evening classes are run in ecclesiastical and secular embroidery.

Shoreditch College for the Clothing Industry (Curtain Road, London, E.C.2) provides training at all levels for all sections of the clothing industry. Courses lead to the examinations of the

Clothing Institute and the City and Guilds of London Institute and are organised in six sections — Management, Clothing Design and Textiles, Dress and Light Clothing, Men's and Women's Tailoring, Sewing Machine Repair and Maintenance and Short Full-time Courses. Students who successfully complete full-time courses are awarded a College Certificate.

The course in **Management** leads to the C.G.L.I. Full Technological Certificate in Clothing Technology (Course No. 128) and to the examinations of the Clothing Institute. The course is three years full-time; candidates should be not less than 17 and have a minimum of five G.C.E. 'O' level passes, including English and mathematics.

Full-time courses in **Clothing Design** lead to the award of the County Certificate in Art and Design. The courses last three years and are designed to train Assistant Designers, Pattern Cutters, Graders or Assistant Buyers. Candidates should be not less than 16 and have at least three G.C.E. 'O' level passes, including English.

Full-time and part-time courses in **Dressmaking** lead to the award of the C.G.L.I. Intermediate and Final Certificates in Dress Manufacture (Course No. 126) and the Full Technological Certificate in Clothing Technology (Course No. 128). Full-time courses last three years and part-time courses two and four years.

Full-time and part-time courses in **Men's and Women's Tailoring** lead to the award of the C.G.L.I. Intermediate and Final Certificates in Tailors' Cutting and Tailoring (Course No. 116). A two-year full-time course is offered in Wholesale Tailoring and a two- or three-year full-time course is offered in Retail Bespoke Tailoring.

Three-year part-time courses in **Clothing Machine Engineering** lead to the award of the College Certificate and will also meet the requirements of the C.G.L.I. draft examination for clothing machine engineers when the scheme comes into force.

College of Domestic Science, Robert Gordon's Technical College (Queen's Road, Aberdeen) offers a post-Diploma course in Dressmaking.

Glasgow and West of Scotland College of Domestic Science (1, Park Drive, Glasgow, C.3) offers a post-Diploma course in Needlework and Millinery and awards a Diploma in Dressmaking, Needlework and Millinery and a Certificate in Advanced Needlework and Dressmaking.

Edinburgh College of Domestic Science (5, Atholl Crescent, Edinburgh, 3) awards a Diploma in Needlework, Dressmaking, Millinery and Homecraft and Certificates in Needlework and Dressmaking.

EXAMINATIONS OF THE CITY AND GUILDS OF LONDON INSTITUTE

The Institute conducts examinations for the following certificates:

<u>Subject No.</u>	<u>Title</u>	<u>Grades</u>
116	Tailors' Cutting and Tailoring	Men's. Intermediate Men's Bespoke. Final Men's Wholesale. Final Women's. Intermediate Women's Bespoke. Final Women's Wholesale. Final.

Candidates for the Final examination must already have passed the Intermediate.

126	Dress Manufacture	Intermediate Final
128	Clothing Technology	Full Technological Certificate

Candidates should already have a Final Certificate in Tailors' Cutting and Tailoring (Course No. 116) or in Dress Manufacture (Course No. 126) or qualify under the special regulations in respect of Manufacture of Hosiery and Knitted Goods (Course No. 40).

231	Embroidery
232	Advanced Embroidery

Candidates must usually have passed the old Intermediate examination in Hand Embroidery or the present examination in Embroidery (Course No. 231).

233	Dress
234	Advanced Dress

Candidates must usually have passed in Dressmaking (Ordinary) on the old syllabus or in Dress on the present syllabus (Course No. 233).

235	Millinery
236	Advanced Millinery

Candidates must usually have passed in Millinery (Ordinary) on the old syllabus or in Millinery on the present syllabus (Course No. 235).

<u>Subject No.</u>	<u>Title</u>	<u>Grades</u>
239	Ladies' Tailoring	
240	Advanced Ladies' Tailoring	
Candidates must usually have passed in Ladies' and Children's Tailoring (Ordinary) on the old syllabus or in Ladies' Tailoring on the present syllabus (Course No. 239).		
40	Manufacture of Hosiery and Knitted Goods	Final

CERTIFICATES OF THE REGIONAL EXAMINING UNIONS

(i) EAST MIDLAND EDUCATIONAL UNION

The E.M.E.U. awards **certificates** in Dress, Embroidery and Ladies' and Children's Tailoring. The subjects are of a semi-vocational character and the award of a certificate is intended to show that the candidate has reached a reasonable standard of proficiency. There are two levels of pass, first and second class.

(ii) UNION OF EDUCATIONAL INSTITUTIONS

The U.E.I. awards **certificates** in Dress and Ladies' Tailoring. The syllabuses have been designed so that they may, if necessary, be used as the first two years of courses leading to the City and Guilds of London Institute's examinations in the corresponding subjects (Course Nos. 233 and 239) at the end of a third year.

(iii) UNION OF LANCASHIRE AND CHESHIRE INSTITUTES

The U.L.C.I. awards **certificates** in Dressmaking, Embroidery, Ladies' Tailoring, Millinery, Needlework and the Principles of Pattern Cutting.

Candidates who pass the final examination in **Dressmaking** are regarded as having passed an examination equivalent to the City and Guilds of London Institute's examination in Dress Manufacture (Intermediate) (Course No. 126).

Candidates who pass the final examination in **Ladies' Tailoring** are regarded as having passed an examination equivalent to the C.G.L.I.'s examination in Ladies' Tailoring (Course No. 239).

Candidates who pass the final examination in **Millinery** are regarded as having passed an examination equivalent to the C.G.L.I.'s examination in Millinery (Course No. 235).

The courses in Men's and Women's Tailored Garments (**Principles of Pattern Cutting**) are preparatory to the C.G.L.I.'s course in Tailors' Cutting and Tailoring (Course No. 116).

(iv) NORTHERN COUNTIES TECHNICAL EXAMINATIONS COUNCIL

The N.C.T.E.C. awards a **Single-subject Certificate** to candidates successful at the end of each stage in a three-year course in Men's Tailoring. The Council also awards a **Single-subject Certificate** to candidates successful at the end of each stage in a three-year course in Ladies' Tailoring; a **Grouped Course Certificate** is awarded to candidates successful at the third stage.

COMMERCE, ECONOMICS AND BUSINESS STUDIES

The Institute of Commerce

1 and 2, Lincoln's Inn Fields, London, W.C.2

Fellow (F.C.I.). A Fellow must be at least 25 years of age, and have had five years' experience in commerce and have passed or obtained exemption from the Institute's examinations (*see below*) with first class marks in at least four subjects of the Final examination.

Associate (A.C.I.). An Associate must be at least 21 years old, have five years' commercial experience and have passed or been exempted from the Institute's examinations (Preliminary, Intermediate and Final—*see below*).

Ordinary Member. This class of membership includes Registered students of the Institute, i.e. those studying for the Institute's examinations, and people who have passed the qualifying examinations but are not old enough to become Associates.

THE QUALIFYING EXAMINATIONS

Exemption from the Preliminary and Intermediate examinations may be granted to holders of approved equivalent qualifications. No exemption is granted from the Final examinations.

The Preliminary Examination. There is no minimum educational requirement for entrants to this examination, which covers English, arithmetic and two other subjects (academic or commercial) from a list of approved subjects at Stage I.

The Intermediate Examination may be taken in two parts; it consists of any five papers from the following (Stage II): English, book-keeping; shorthand; typewriting; law of contract; law relating to sale of goods; office practice and management; salesmanship.

The Final Examination may also be taken in two parts. Candidates for Associateship of the Institute must pass in six subjects; a Fellowship Diploma is granted to those who obtain first class marks in four of these six subjects. The subjects may be chosen from the following list (Stage III): English; general commercial practice; accountancy; office practice and management (advanced); mercantile law; company law; economics; public relations; industrial administration.

OTHER AWARDS

The Institute also awards the following diplomas based on the same subject syllabuses as the above examinations and providing a series of qualifications for candidates who do not necessarily seek admission to Membership of the Institute.

Junior Commercial Group Diploma. Awarded to those who pass in any four Stage I subjects, three with first class marks.

Intermediate Commercial Group Diploma. Awarded to those who pass in any five Stage II subjects, three with first class marks.

Senior Commercial Group Diploma. Awarded to those who pass in any five Stage III subjects, three with first class marks.

A Combined Shorthand-Typewriting Certificate is awarded to candidates who show competence in both subjects at a combined test. The certificate shows the speed of shorthand dictation, and is accepted as one of the optional subjects in the Preliminary qualifying examination.

UNIVERSITY DEGREES, DIPLOMAS AND CERTIFICATES

(i) FIRST DEGREES IN COMMERCE

First degrees in Commerce are awarded by the following universities. The length of the course and the entrance requirements are given in each case.

Birmingham. B.Com. Hons.: 3 years. 3 'A' level G.C.E. passes and Mathematics at 'O' level.

Edinburgh. B.Com. Hons.: 4 years. 3 'A' level G.C.E. or S.C.E. passes (or 2 at good grades).

Edinburgh. B.Com. Ord.; B.Sc.(Soc.Sci.) Ord. in Commerce: 4 years. 3 'A' level G.C.E. or S.C.E. passes (or 2 at good grades).

Leeds. B.Com. (with accountancy or textiles as principal subject): 3 years. Preferably 3 'A' level G.C.E. passes.

Liverpool. B.Com.: 3 years. Preferably 3 'A' level G.C.E. passes.

Southampton. B.Sc.(Soc.Sci.) Commerce and Accountancy, Commerce and Statistics: 3 years. 2 'A' level G.C.E. passes.

Strathclyde. B.A. Commerce: 4 years. 2 'A' level G.C.E. or S.C.E. passes.

(ii) FIRST DEGREES IN ECONOMICS

The following universities offer courses for degrees in Economics which form a suitable introduction to a career in business and commerce. Normally the entry requirements are 2 or 3 'A' level G.C.E. passes; in many cases Mathematics must be passed at least at 'O' level. (For degrees in Accounting *see* special section on this subject, page 397.)

Birmingham. B.Com., B.Soc.Sc.: Economics and Econometrics/Statistics may be taken as special subjects.

Bristol. B.Sc.: Economics.

Bristol C.S.T. B.Sc.: Economics and Administration.

Cambridge. B.A.: Economics.

Durham. B.A.: Economics may be taken with Politics and Law.

East Anglia. B.A.: Economics and Economic History.

Essex. B.A.: Economics.

Exeter. B.A.: Economics or Economic History.

Hull. B.Sc.(Econ.): Economics.

Keele. B.A.: Economics may be one of two principal subjects.

Kent. B.A.: Economics and Economic History.

Lancaster. B.A.: Economics.

Leeds. B.A.: Economics or Economics with Statistics.

Leeds. B.Sc.: Agricultural Economics.

Leicester. B.A.: Economics and Economic History. **B.Sc.:** Economics.

Liverpool. B.A.: Economics.

London (L.S.E.). B.Sc.(Econ.): with special subjects: Economics; Econometrics; Monetary Economics; Economic History; Industry and Trade; Accounting; Computational Methods; Statistics.

London (Q.M.C.). B.Sc.(Econ.): Economics.

London (U.C.). B.Sc.(Econ.): Economics.

Manchester. B.A.(Econ.): Economic and Social Studies.

Newcastle. B.A.: Economic Studies and Economics and Accounting.

Nottingham. B.A.: Economics; Industrial Economics; Economic and Social History.

Oxford. B.A.: Philosophy, Politics and Economics (one course).

Reading. B.A.: Economics.

Reading. B.Sc.: Agricultural Economics.

Royal C.A.T. Salford. B.Sc.: Business Operation and Control.

Sheffield. B.A.(Econ.): Economics, Accounting and Financial Administration; Economics (with Mathematics/Statistics); Economic History.

Southampton. B.Sc.(Soc.Sci.): Economics, Accountancy and Statistics.

Sussex. B.A.: Economics as major subject.

Warwick. B.A.: Economics — with Economics and Political History, and Public Policy and Industry.

York. B.A.: Economics (with Statistics), Economics (with Economic History).

Wales (Aberystwyth). B.Sc.(Econ.): Economics (Agricultural Economics or special subject).

Wales (Bangor). B.A.; B.Sc.: Economics.

Wales (Cardiff). B.Sc.(Econ.): Economics.

Wales (Swansea). B.A.; B.Sc.: Economics.

Welsh C.A.T. B.Sc.: Economics.

Welsh C.A.T. B.Sc.Tech.: Industrial Economics.

Aberdeen. M.A.: Economic Science and Economics and General History.

Edinburgh. M.A.: Economic Science.

Glasgow. B.Sc.: Agricultural Economics. **M.A.:** Economic History with Political Economy.

St. Andrews. M.A. Hons. Soc.Sci.: Economics (in joint honours course Political Economy).

Strathclyde. B.A.: Economics, Economic History, Accountancy.

Belfast. B.Sc.(Econ.): Economics, Economic and Social History.

(iii) FIRST DEGREE IN BUSINESS STUDIES

Sheffield. B.A.(Econ.): Economics and Business Studies.

(iv) HIGHER DEGREES

The universities listed above may admit students to courses of study and research for higher degrees—normally M.Sc. or Ph.D.

(v) UNIVERSITY DIPLOMAS AND CERTIFICATES

Birmingham. Diploma in Commerce: 1-year postgraduate course.

London (L.S.E.). Diploma in Economics and Social Administration: 1-year course.

Manchester. Diploma in Agricultural Economics and Economic Development: 1-year postgraduate course.

Newcastle. Diploma in Economic Studies: 2-year course.

Nottingham. Diploma in Political, Economic and Social Studies: 4 years' extramural study.

Oxford. Diploma in Economic Development: 1 year's postgraduate study—open to members of the university.

Oxford. Diploma in Economic and Political Science: open to non-members of the university.

Reading. Diploma in Agricultural Economics: 1 year's postgraduate study.

Glasgow. Diploma in Economic Development: 1-year postgraduate course.

Strathclyde. Diploma and Associateship (A.R.C.S.T.): courses in Commerce and Administration. (This course now leads to a degree award.)

(vi) DEGREES OF THE C.N.A.A.

Sandwich courses leading to the degrees of the C.N.A.A. are offered at the following colleges:

City of London College. B.A. Honours in Business Studies. 4-year course.

Ealing Technical College, B.A. Honours in Business Administration. 4-year course.

Lanchester College of Technology, Coventry. B.A. Honours or Ordinary in Business Studies. 4-year course.

Woolwich Polytechnic. B.A. Honours in Business Studies. 5-year course.

NATIONAL DIPLOMAS AND CERTIFICATES IN BUSINESS STUDIES

The courses are approved by the Joint Committee for National Certificates and Diplomas but are planned by local colleges—thus the subjects covered may vary from college to college. O.N.D. and O.N.C. courses must normally last for two years. Candidates must be at least 16 years old and should normally hold G.C.E. (or equivalent) 'O' level passes in three approved academic subjects including English. Many professional bodies give subject-for-

subject exemptions in their qualifying examinations to holders of O.N.D. and O.N.C. (and for H.N.D. and H.N.C.). Supplementary courses covering additional subjects may lead to **Endorsements** on National Certificates and Diplomas.

Ordinary National Certificate (O.N.C.). Courses (normally part-time) cover the following subjects:

First year. Structure of commerce and three subjects from accounting, economic history, economic geography, principles of English law, elements of statistics.

Second year. Economics, English and two subjects from accounting, interpretation of accounts, principles of English law (if not taken in the first year), elements of statistics (if not taken in the first year), a modern language.

Ordinary National Diploma (O.N.D.). Courses can be two years full-time or part-time. The subjects usually covered are:

First year. Structure of commerce, accounting, English and two subjects from economic history, economic geography, general law, mathematics, elements of statistics, a modern language.

Second year. Economics, accounting, English and two subjects from economic history*, economic geography*, general law*, elements of statistics*, mercantile law, British constitution or central or local government, a modern language. (*If not taken in the first year.) The standard is comparable with that of the O.N.C.

Higher National Certificate (H.N.C.). This is designed for older students who wish to continue their studies after O.N.C., which students must normally hold before going on to H.N.C. Study is by part-time course and usually extends over two years.

The syllabus for H.N.C. generally covers applied economics (compulsory in both years) and two subjects each year chosen from advanced accountancy, costing, human relations, commercial law or industrial law, marketing, application of statistics, secretarial practice, business organisation, modern languages, production methods, economics of transport, purchasing.

Higher National Diploma (H.N.D.). This may be taken by candidates who hold either O.N.D. or O.N.C. in Business Studies or G.C.E. with at least one pass at 'A' level. They must be at least 18 years old. The courses for the Diploma are two years full-time or three years sandwich. The Diploma gives exemption from the examinations of a large number of professional bodies and is also a qualification in itself. The standard is comparable with that of the H.N.C. and the conditions of study allow for a wider use of

project work and the inclusion of liberal studies. The H.N.D. syllabus usually follows the following lines: economics is taken each year and in addition four subjects are chosen each year from accounting, business finance, commercial law, costing, distribution, economics of transport, human relations, industrial law, marketing, market research, mercantile law, modern languages, office organisation, principles of English law, production methods, purchasing, secretarial and administrative practice, statistics, structure of business.

The following colleges offer courses leading to H.N.D.:

Birmingham College of Commerce (2 years full-time; 3 years sandwich); Blackburn Municipal Technical College and School of Art (5 years sandwich); Bolton Technical College (2 years full-time); Bournemouth Municipal College of Technology and Commerce (2 years full-time); Brighton Technical College (2 years full-time); Bristol College of Commerce (3 years sandwich); High Wycombe College of Further Education (2 years full-time); Slough College (2 years full-time; 3 years sandwich); Mid-Cheshire Central College of Further Education (3 years sandwich); Lanchester College of Technology (3 years sandwich (Industrial Sales); 3 years sandwich (Industrial Sales, Industrial Accountancy); 2 years full-time (Industrial Sales, Industrial Accountancy, Modern Languages)); Croydon Technical College (2 years full-time); Mid-Essex Technical College (2 years full-time; 3 years sandwich); South-East Essex College (2 and 3 years full-time); Farnborough Technical College (2 and 3 years full-time; 3 years sandwich); Letchworth College of Technology (2 years full-time; 3 years sandwich); Watford College of Technology (2 years full-time); Leeds College of Commerce (2 years full-time; 3 years sandwich); Liverpool College of Commerce (2 years full-time; 3 years sandwich); Balham and Tooting College of Commerce (2 years full-time; 3 years sandwich); City of London College (2 years full-time); North-Western Polytechnic (2 years full-time; 3 years sandwich); The Polytechnic, Regent Street (2 years full-time); City of Westminster College (2 years full-time; 3 years sandwich); West London College of Commerce (2 years full-time); Woolwich Polytechnic (4 years sandwich); Luton College of Technology (2 years full-time); Manchester College of Commerce (2 years full-time); Constantine College of Technology, Middlesbrough (3 years sandwich); Ealing Technical College (2 years full-time); Enfield College of Technology (2 years full-time); Hendon College of Technology (2 years full-time; 3 years sandwich); Newcastle Municipal College of Commerce (2 years full-time; 3 years sandwich); Nottingham and District Technical College (3 years full-time); Oxford College of Technology (2 years full-time); Denbighshire Technical College (2 years full-time); Derby and District College of Technology (3 years sandwich); Watford College of Technology (2 years full-time; 3 years sandwich); Medway College of Technology (2 years full-time); Hull College of Commerce (2 years full-time); Staffordshire College of Commerce (3 years sandwich (Marketing); 3 years sandwich (Marketing, Purchasing and Production)); Guildford Technical College (2 years full-time); Kingston College of Technology (2 years full-time); Crawley College of Further Education (2 years full-time); The College, Swindon (3 years sandwich); Wolverhampton and Staffordshire College of Technology (2 years full-time); Bromsgrove College of Further Education (3 years sandwich); Redditch College of Further Education (2 years full-time); Welsh College of Advanced Technology (2 years full-time); Glamorgan College of Technology (3 years sandwich); Newport and Monmouthshire College of Technology (3 years sandwich); Swansea College of Technology (2 years full-time).

COLLEGE DIPLOMAS AND ASSOCIATESHIPS

Courses are offered at the following colleges:

<u>College</u>	<u>Duration</u>	<u>Award</u>
Bristol College of Science and Technology	4 years sandwich	Diploma in Economics and Administration
Loughborough College of Technology	4 years sandwich	College Diploma in Industrial Chemistry and Management; College Diploma in Industrial Engineering and Management; College Diploma in Ergonomics and Cybernetics College Diploma in Commerce
Birmingham College of Commerce	4 years sandwich 3 years full-time 1 year full-time	Diploma in Commerce and Advanced Business Studies Diploma in Commerce, Advanced Business Studies and Business Administration
Luton College of Technology	3 years sandwich	
Manchester College of Commerce	3 years sandwich	
Reading Technical College	2 years full-time	
Sheffield College of Commerce and Technology	2 years full-time 3 years sandwich	Business Studies, Technical Sales and Marketing
Southampton College of Technology	2 years full-time	Business Studies
Stockport College for Further Education	2 years full-time	Business Studies
North Staffordshire College of Technology	2 years full-time	Business Studies
Birmingham College of Commerce	3 years full-time	College Diploma in Communication Studies
Watford College of Technology	2 years sandwich	College Diploma in Marketing Management
The Polytechnic, Regent Street	3 years full-time	College Diploma in Modern Languages
West London College	3 years full-time	College Diploma in Business Studies with Modern Languages
Leeds College of Commerce	2 years full-time	College Diploma in Modern Languages
Leicester College of Technology	24 weeks full-time 18 weeks full-time	Diploma in Management Studies College Course in Management Services
Nottingham Regional College of Technology	1 year full-time	College Diploma in Personnel Management
Brighton College of Technology	3 years full-time	Diploma in Computing and Data Processing

College	Duration	Award
City of London College	4 years sandwich	College Diploma
Leeds College of Commerce	1 year full-time	Diploma in Administration Studies, Certificate in Business Training
Liverpool College of Commerce	1 year full-time	College Diploma
City of London College for the Distributive Trades	4 years full time	College Diploma in Advertising and Advertising Joint Board Certificate
	2 years full-time	College Certificate and Parts A and B of British Display Society
	1 year full-time	College Certificate in Retail Distribution
	1 year sandwich	Joint Committee Certificate in Retail Management Principles
The Polytechnic, Regent Street	2 years full-time	College Certificate in Commercial Administration
	4 years sandwich	College Diploma in Commercial Administration with Engineering
Woolwich Polytechnic	5 years sandwich	College Diploma and H.N.D. in Business Studies
Ealing Technical College	4 years sandwich	College Diploma in Business Administration
Hendon Technical College	1 year sandwich	College Diploma in Business Administration
Nottingham and District Technical College	4 years sandwich	College Diploma
Portsmouth College of Technology	4 years sandwich	College Diploma in Commerce and Administration
Welsh College of Advanced Technology	3 years sandwich	College Diploma in Business Administration

QUALIFICATIONS OF THE EXAMINING UNIONS

Note. Qualifications taken primarily by school pupils will be found in Part I.

(i) THE ROYAL SOCIETY OF ARTS

The R.S.A. examines in a wide range of single subjects — commercial and others. Examinations are conducted at Stage I (elementary), Stage II (intermediate) and Stage III (advanced). Preliminary stages do not have to be taken before later stages. **Certificates** are awarded in Stage I as Pass and Pass with Credit and in the other two stages as first and second class. Candidates who gain a Silver Medal in the advanced stage of English, Commerce, Public Administration or Statistics and are under 21 years of age are eligible for Associateship of the R.S.A.

Examinations are conducted in the following single subjects:

Accounting; Advertising; Arithmetic; Audio-Typist's Certificate; Book-keeping; Cargo Insurance; Central or Local Government; Civics; Commerce; Commerce (Finance); Commerce (International Trade); Commerce (Marketing); Commercial Law; Common Law; Company Law; Costing; Danish; Dutch; Economics; English (with Literature); English for Foreigners; English Language; English Law, general principles of; Esperanto; French; Geography, economic; German; History, modern British; History, economic and social; History of the British Commonwealth; Income Tax Law and Practice; Italian; Law of Evidence and Civil Procedure; Law of Trusts; Mathematics; Norwegian; Office Practice; Public Administration; Real Property and Conveyancing; Shipping Law and Practice; Shorthand; Shorthand-Typist's Certificate; Spanish; Statistics; Swedish; Typewriting; Welsh.

In addition to single-subject certificates, **Group Certificates** are awarded to candidates who pass in a number of specified subjects. Group Certificates are awarded in the following fields:

Commercial Subjects, Stages I, II and III.

Clerical Studies.

Certificate for Cost Clerks.

Foreign Languages (three foreign languages must be included).

Law subjects.

Certificate for Shipping Clerks.

A special certificate is also awarded in Commerce—the **R.S.A. Commercial Certificate Stage II (Intermediate)**. This is awarded to candidates who pass in one examination in English Language, two subjects from Accounts, Arithmetic, Commerce and Office Practice and two other approved subjects.

(ii) THE LONDON CHAMBER OF COMMERCE

Single-subject examinations are conducted in three stages—elementary, intermediate and higher. Subjects covered include:

Arithmetic; Book-keeping; English; Foreign Languages; Geography; Handwriting; History; Mathematics; Shorthand (including French); Typewriting; Business Statistics; Costing; Economics; Elements of Commerce; English for Commerce for Overseas Students; General Science; Shorthand-Typist's Certificate; Accounting; Advertising; Banking and Currency; Commerce and

Finance; Insurance—Cargo or Maritime; Salesmanship and Sales Management; Secretarial Practice; Shipping; Law subjects.

Private Secretary's and Shorthand-Typist's Diplomas are granted (*see* Secretarial and Shorthand Typing). A **Group Certificate** is awarded at the intermediate stage in Book-keeping for distinction in book-keeping with a pass in arithmetic and English or elements of commerce.

Higher Group Diplomas are awarded for distinctions in the Higher grade with other specified passes. The Diplomas are granted in the following subjects:

Accounting; Costing; Economics; Languages; Law; Secretarial Practice; Shipping.

(iii) **EAST MIDLAND EDUCATIONAL UNION**

The Union offers examinations at two levels.

Pre-Senior Commercial examinations, intended for candidates of at least 15 years, are as follows:

Commercial Course covering English and Business Calculations, with an optional subject; a **Clerical Course** covering English and Shorthand or Typing; and a **Commercial Course** for students intending to go on to O.N.C. in Business Studies; and a **Senior Grouped Course Certificate** awarded to candidates who pass the following subjects in one examination during each year of a three-year course.

General Commercial Course Certificate.

First year

Commerce and two subjects from Book-keeping; English; Arithmetic or Commercial Mathematics; Commercial Geography; French; German or Spanish.

Second year

Commerce and two subjects from Book-keeping; English; Arithmetic or Commercial Mathematics; French; German or Spanish.

Third year

Commerce and two subjects from Book-keeping; English; French; German or Spanish.

(iv) **NORTHERN COUNTIES TECHNICAL EXAMINATIONS COUNCIL**

Senior General Commercial Course Certificate. This is taken after a three-year course, the subjects for which are as follows:

First year

English and two subjects from Elements of Commerce and Accounts; Commercial Mathematics; Economic History; Economic Geography; Modern Languages.

Second year

Structure of Commerce and two subjects from Accounting; Economic History; Economic Geography; English; Principles of English Law; Commercial Mathematics or Elements of Statistics; Modern Languages.

Third year

Economic Background or Economics and two subjects from English; Accounting; Interpretation of Accounts; Principles of English Law; Elements of Statistics; Mercantile Law; Economic Geography; the Social Services; Elements of Insurance; Central and Local Government; Functions and Organisation of the Office; Modern Languages.

Clerical Examinations. These are held at various levels or grades in the following subjects:

English, Grades I to IV (students with G.C.E. 'O' level

English would normally start at grade IV).

English for Secretaries.

Shorthand, Grades I to VII.

Typewriting, Grades I to V.

Combined Shorthand-Typewriting, Grades I to III.

Office Practice.

Secretarial Duties.

A Grouped Course Certificate is awarded for success in English and either Shorthand or Typewriting at any grade.

(v) UNION OF EDUCATIONAL INSTITUTIONS

Introductory Commercial Course Certificate. This is designed to qualify students for entry to the General Commercial Course. It is taken after one year's part-time study and candidates must pass in English and one or two subjects from calculations and accounts; geography or commerce.

General Commercial Course Certificate. The syllabus for this course is similar to that for the O.N.C. in Business Studies, but is designed for students not qualified for such a course. The syllabus covers:

First year

Book-keeping, Commerce, Commercial Mathematics, English.

Second year

Book-keeping, Commerce and two subjects from Principles of English Law; Elements of Statistics; Economic Geography; Economic History.

Candidates must pass in four subjects to obtain the certificate.

The Union also awards certificates in French, German and Spanish.

(vi) UNION OF LANCASHIRE AND CHESHIRE INSTITUTES

Preliminary Clerical and Office Studies Course Certificate.

This is an introductory course covering English and Business Calculations and up to two optional subjects.

The Union also awards Certificates in Secretarial subjects (*see* page 977) and in Modern Languages.

(vii) WELSH JOINT EDUCATION COMMITTEE

Preliminary Course in Commerce Certificate. This is taken after a one-year part-time introductory course covering English; Commercial Mathematics; Geography; History; Modern Languages; Shorthand and Typewriting. The Certificate is awarded for passes in English and any other two of the above subjects.

General Commercial Course Certificate. This course is designed for students who cannot proceed to the O.N.C. in Business Studies. The subjects of the course are as follows:

First year

English; Commerce; Commercial Mathematics; Social and Economic History; a Modern Language; Geography; Book-keeping.

Second year

Structure of Commerce; Economic Geography; Economic History; Principles of English Law; a Modern Language; Book-keeping; Commercial Mathematics.

Third year

Economics; Accounting or Principles and Interpretation of Accounts; Statistics; Principles of English Law or Commercial Law; a Modern Language.

OTHER QUALIFICATIONS

The Certificate in Office Studies of the Department of Education and Science is taken after a two-year part-time course in a commercial or other college. It is designed principally for

young people who have stayed at school until the age of 16, but there is no minimum educational entry requirement and 15-year-old school-leavers will be accepted if they have taken a suitable part-time preliminary course. For some students the certificate will be the first step towards the O.N.C. in Business Studies. The examination is taken at the end of the second year; compulsory subjects are English and General Studies, Clerical Duties, and either Business Calculations or Book-keeping. There is one other subject chosen by the candidate. The following examining bodies offer the Certificate in Office Studies, courses for which have been approved by the Department of Education and Science:

The East Midland Educational Union; London Chamber of Commerce; Northern Counties Technical Examinations Council; Royal Society of Arts; Union of Educational Institutions; Union of Lancashire and Cheshire Institutes; Yorkshire Council for Further Education; Welsh Joint Education Committee.

SCOTTISH QUALIFICATIONS

Certificate in Business Administration. This course is available full-time and also by day-release at Dundee Technical College. It is designed for the junior or trainee manager and entrants must be at least 21 years old. Although it is a qualification in its own right, it can also serve as an introduction to the Diploma in Business Studies (*see above*).

AWARDS OF THE SCOTTISH COUNCIL FOR COMMERCIAL EDUCATION:
22, Great King Street, Edinburgh.

The Senior Commercial Certificate is normally taken after a two-year part-time course. Entrants must have passed four S.C.E. subjects on the Ordinary grade including English. Many professional bodies give exemptions from their Intermediate examinations for this certificate. Courses are offered by:

Aberdeen Commercial College; Kingsway Technical College, Dundee; Central College of Commerce and Distribution, Glasgow; Esk Valley College, Dalkeith; Falkirk Technical College.

The Advanced Commercial Certificate is usually taken after a two-year part-time course. Candidates must have already passed the S.C.C.E. Senior Commercial Certificate. Courses are offered at:

Robert Gordon's Technical College, Aberdeen; Dundee Technical College; Heriot-Watt College, Edinburgh.

COMPANY SECRETARIES

The Chartered Institute of Secretaries

16, Park Crescent, London, W.1

Fellow (F.C.I.S.). Fellows are elected from the Associates of the Institute. They must be at least 25 years old, have passed the Institute's examinations and have had eight years' experience with at least three spent as secretary or assistant secretary of a substantial organisation, or have been a member of the Institute for at least ten years and have had the three years' executive responsibility described above.

Associate (A.C.I.S.). Associates must be at least 21 years old and must have completed the Institute's examinations. They should have had at least six years' qualifying experience in the office of a limited liability company or other corporation, although this period may be shortened for graduates and others who have spent some time in full-time study.

A Licentiate is one who has passed the Institute's examinations but has not completed the required period of qualifying service.

A Registered Student is one who is studying for the Institute's examinations. He must be at least 16 years old and have passed or (in Great Britain) obtained exemption from the Institute's Preliminary examination. He must be working in the office of a company or other body, or he must be following a course approved by the Council in a commercial college, preparing for the Institute's examinations.

Students are normally expected to complete the Institute's examination in six years.

THE EXAMINATIONS

The Preliminary Examination is a test of general education. It is no longer held in Great Britain and candidates must obtain exemption by offering approved qualifications; these include G.C.E. in four subjects at least two of which must be at 'A' level or in five subjects at 'O' level (these passes must include English language, mathematics or a natural science and other approved subjects), and S.C.E. in four subjects of which three must be in the Higher grade or five Ordinary grade passes, in each case including the same subjects as for G.C.E., and other approved certificates.

Candidates over the age of 23 years may be allowed to waive these requirements. The examination is still held in Eire and overseas.

The Intermediate Examination. Candidates must have passed or been exempted from the Preliminary examination. They must be at least 18 years old and Registered Students of the Institute. The examination covers Accountancy, Economic Theory, English and General Principles of Law.

Total exemption from the Intermediate may be granted to university graduates in Commerce, Economics, Law, Arts or Sciences, and to holders of the Final examination certificates of certain professional bodies. Subject-for-subject exemption may be granted to holders of the Ordinary and Higher National Diplomas and Certificates in Business Studies, the Scottish Senior Commercial Certificates, G.C.E. 'A' level and certain college Diplomas.

The Final Examination. Candidates must have passed or been exempted from the Intermediate examination. The examination is taken in three consecutive parts. Candidates must be at least 22 years old unless they are studying full-time at a recognised college. The examination covers the following subjects: Part I: Economics policies and problems; mercantile law or law of Local Government I; secretarial and administrative practice I. Part II: Advanced accountancy or accountancy (Local Government); company law; law of Local Government II; building society law and practice; law of electricity supply; co-operative law and administration or law of gas supply; secretarial and administrative practice II or public administration I. Part III: Company secretarial practice or public administration II (or I if not taken in Part II); meetings, law and procedure; secretarial practice (taxation) or secretarial and administrative practice III or secretarial practice (Local Government).

Certificates of Merit are awarded to candidates in both the Intermediate and the Final examinations who reach a set standard, higher than the pass standard in all parts of the examinations and in their total marks.

COURSES OF INSTRUCTION

Courses leading to the Institute's examinations are offered at a number of technical colleges.

The Corporation of Secretaries

13, Devonshire Street, London, W.1

Fellow (F.C.C.S.). To be eligible for election to Fellowship a candidate must have passed or obtained exemption from the qualifying examinations of the Corporation, be at least 24 years old

and have been practising as a secretary or assistant secretary of a company for at least three years. A Fellow may describe himself as an 'Incorporated Secretary'.

Associate (A.C.C.S.). An Associate must have passed or obtained exemption from the qualifying examinations of the Corporation, must be at least 21 years old and should have been working in a company's office for at least three years. He also may describe himself as an 'Incorporated Secretary'.

A Licentiate is one who has passed the Corporation's examinations but is not qualified for other classes of membership because of his lack of approved experience.

A Registered Student is one who is studying for the Corporation's examinations. He should be at least 16 years old and have passed or obtained exemption from the Preliminary examination. Only Registered Students may enter for the Intermediate and Final, and should take these examinations within five years of registration.

THE QUALIFYING EXAMINATIONS

The Preliminary Examination. At the time of writing, the regulations for the Preliminary Examination are being revised.

It covers four subjects: English; Arithmetic; History or Geography and one subject from Arithmetic, Algebra and Geometry; Book-keeping; Commerce; French; Geography; German; History; Latin; Shorthand; Spanish. Exemption from the examination may be granted to candidates who have G.C.E. 'O' level (or equivalent) passes in English Language, Mathematics or Commercial Mathematics and two other approved academic subjects.

The Intermediate Examination consists of four subjects — English, economics, general principles of law and accountancy. The standard is comparable with that of G.C.E. 'A' level. The examinations may be taken after part-time or correspondence-course study or at the end of a full-time course at a technical college.

The Final Examination covers company law, mercantile law, economics, accountancy, business administration and all aspects of secretarial practice. It is divided into three parts of three subjects; each part is taken separately. A range of law subjects may be taken as an alternative to English company law, including Scots, Irish, Indian or South African company law, law of Local Government and law relating to agriculture, building societies, the coal industry, Co-operative Societies, the electricity industry, the gas industry.

To candidates who have taken relevant options the Final Examination Certificate may be awarded in Local Government

Administration and in National Health Service Executive Council Administration.

COURSES OF INSTRUCTION

Courses leading to the Corporation's examinations are offered at a number of technical colleges.

Faculty of Secretaries

(incorporated by guarantee)

51, Tormead Road, Guildford, Surrey

Fellow (F.F.C.S.). A Fellow must have been practising as the secretary of a limited company, public body or other organisation for at least five years, and have passed the Final examination of the Faculty (*see below*). A Fellow is entitled to describe himself as a 'Corporate Secretary'.

Associate (A.F.C.S.). Associates are those who have at least three years' experience as a secretary or assistant secretary of a limited company, public body or other organisation, and have passed the Intermediate and Final examinations of the Faculty (*see below*). An Associate may describe himself as a 'Corporate Secretary'. Members in practice may use the designation 'Certified Public Secretary' instead.

Fellows and Associates may sometimes be elected without satisfying the examination requirements.

A Registered Student must be at least 16 years old and have passed or gained exemption from the Preliminary examination of the Faculty.

Registered Graduate (L.F.C.S.). Registered Graduates must be at least 19 years old and must have passed the Faculty's Preliminary examination and another examination or group of examinations from the Faculty's whole list—professional and single subject.

Combinations of the following subjects with the Preliminary examination qualify a candidate for Graduate Membership:

- (a) The Advanced Examination in Shorthand; holders may describe themselves as *Incorporated Shorthand Writers*.
- (b) Shorthand speed 100 w.p.m., advanced typing, mercantile law, advanced book-keeping, economics; holders may describe themselves as *Certified Private Secretaries*.
- (c) Advanced book-keeping; holders may describe themselves as *Incorporated Book-keepers*.
- (d) Intermediate examinations of the Faculty in advanced book-keeping, company accounting, company law,

mercantile law, banking and exchange and internal auditing; Final examinations of the Faculty in company accounting, company law, costing, taxation, cost and management accounting, statistics, income tax law and procedure, management principles and practice, mercantile law; provided that the holder of these examinations has been employed as company accountant or senior assistant to a company accountant for at least three years, he may describe himself as a *Certified Company Accountant*.

No exemptions will be granted in the examination requirements for this qualification.

MEMBERSHIP EXAMINATIONS

The Preliminary Examination has as its subjects English, commerce, commercial arithmetic and elementary book-keeping with one optional subject (geography, elementary economics, office organisation, shorthand, 50 w.p.m., or elementary typewriting). Exemption will be granted to candidates who would be qualified for university matriculation, i.e. usually five 'O' level G.C.E., or equivalent, passes in English, mathematics, or a science subject and other academic subjects.

The Intermediate Examination is open to Registered Students of the Faculty and must be completed in three years from registration. It may be taken in one sitting or in two parts. Part I covers advanced book-keeping, mercantile law and economics; Part II, secretarial practice, commercial arithmetic, company law, banking and exchange.

The Final Examination may also be taken in one or two parts and must be completed in three years from the time when the Intermediate is passed. Part I includes papers on advanced accountancy, mercantile law, company law and secretarial practice; Part II, law and conduct of and procedure at meetings, income tax law and practice, costing or statistics. There are special options for secretaries employed by Borough Councils, Town Clerks, and Hospitals.

OTHER EXAMINATIONS OF THE FACULTY

Junior School Commercial Certificate. This examination has exactly the same syllabus as the Faculty's Preliminary examination (*see above*).

Single-subject Commercial Examination Certificates are offered by the Faculty in the following subjects:

	<u>Stage I</u>	<u>Stage II</u>	<u>Stage III</u>
	<u>Elementary</u>	<u>Intermediate</u>	<u>Advanced</u>
Shorthand	50 and 60 w.p.m.	80 and 100 w.p.m.	120 w.p.m.
Typewriting	25 w.p.m.	35 w.p.m.	50 w.p.m.
Book-keeping			

Questions on technique are included as well as the time-tests for shorthand and typing. First or second class passes are awarded.

COMPUTERS

There is no qualifying body for workers in the computer field.

The British Computer Society

(founded 1957)

Finsbury Court, Finsbury Pavement, London, E.C.2

This Society is open to those having an interest in computer design, computing and data processing.

Some Fundamentals of Information Retrieval by John R. Sharp

‘A masterly analysis . . . This remarkable book’—*Times Educational Supplement*.

‘All who wish to work in the field should read it’—*Computer Bulletin*.



André Deutsch 35s.

Ordinary Members of the Society are entitled to vote at Society elections.

Associate Members must be under 25 years of age.

Student Members must be at least 18 years of age but not more than 21 years of age.

UNIVERSITY DEGREES AND DIPLOMAS

(i) DEGREES

Edinburgh. B.Sc.: 4 years. **Computer Science** may be taken as a degree subject.

London (L.S.E.). B.Sc.(Econ.): Computational Methods may be taken in Part II as a special subject. 3 years. 2 'A' levels required.

Manchester. B.Sc. Honours in Computer Science: 3 years. 'A' level passes in Mathematics and Physics required.

(ii) DIPLOMAS

Cambridge: Diploma in Numerical Analysis and Automatic Computing. 1-year course.

Edinburgh: Diploma in Computer Science. 1-year course.

Leeds: Diploma in Electronic Computing. 1-year course.

Manchester: Diploma in Numerical Analysis and Automatic Computing.

Southampton: Diploma (D.U.S.) in Numerical Analysis and Automatic Computing.

(iii) DEGREES OF THE C.N.A.A.

Four-year sandwich courses leading to the B.Sc. degree of the C.N.A.A. are offered at Hatfield College of Technology (Computer Science); Wolverhampton and Staffordshire College of Technology (Computer Technology).

NATIONAL DIPLOMA

H.N.D. in Business Studies, with special reference to computers. The 3-year sandwich course, open to holders of O.N.C. or O.N.D. or 1 'A' level pass, is available at the City of Westminster College.

COLLEGE DIPLOMAS

Brighton College of Technology: College diplomas in Computing and Data Processing. 3-year full-time courses.

Constantine College of Technology, Middlesbrough: College diplomas in Mathematics, Statistics and Computers. 2-year full-time course.

Wolverhampton and Staffordshire College of Technology: College diploma in Computer Technology. 3-year sandwich course.

CITY AND GUILDS OF LONDON INSTITUTE EXAMINATIONS

The C.G.L.I. sets an examination for the Certificate for Computer Personnel (subject 319).

Subsequent to 1965-66 a new examination will be set for an Advanced Certificate for Computer Personnel (subject 320).

CREDIT MANAGEMENT

The Institute of Credit Management

3, Berners Street, London, W.1

Fellow (F.I.C.M.). For election as a Fellow a candidate should have had at least five years' experience in Credit Management in an executive position and controlling staff. For the whole of this period he should have been an Associate Member of the Institute.

Associate Member (A.M.I.C.M.). Entry to the associate grade is restricted to those who satisfy the Council of their competence either by passing the Institute's Preliminary and Final examinations (*see below*) or by submitting a thesis (*see below*) or by obtaining exemption from the examinations.

An Associate may describe himself as a *Member of the Institute of Credit Management*.

A Student Member must be preparing for the Institute's examinations or working in a sphere which is relevant to Credit Management. Students must be at least 16 years old.

THE QUALIFYING EXAMINATIONS

The Preliminary Examination. Entrants to this examination must be registered students of the Institute. The examination consists of papers in English and arithmetic and one of the following: general commercial knowledge, commercial geography, German,

French, Spanish. Exemption may be claimed by those who have passed G.C.E. 'O' level (or an approved equivalent) in English language, arithmetic and commercial geography, or general knowledge or a modern language.

The Final Examination. The subjects of the Final are: Part I: Accounting, Commercial Law, Economics or Hire Purchase Law; Part II: Company Law, Credit Sanction, Insolvency. The examination must be taken in two parts. The Council will consider exemption from certain subjects for those holding recognised professional qualifications.

Students who pass the Final examination are eligible for admission to the Institute's Associate grade.

ENTRY BY THESIS

Candidates who wish to do so may submit a thesis instead of taking the above examinations for entry to Associate Membership. Applicants must have been Student Members for at least a year and must be in approved employment. They must also be at least 25 years old.

The thesis, on an aspect of credit management and, if possible, containing some original thought and research, should be at least 8,000 words long. The Council may call a candidate for a viva voce examination before deciding whether to grant him Associate Membership.

DANCING

PROFESSIONAL BODIES

Two main organisations prepare syllabuses and conduct examinations in dancing.

The Imperial Society of Teachers of Dancing Incorporated 70, Gloucester Place, London, W.1

This Society produces graduated syllabuses in various branches of dancing and conducts examinations to test proficiency in these branches. The examinations can be taken after full-time or part-time courses at schools of dancing.

(i) GRADE EXAMINATIONS

These are taken by children who attend dancing classes. They are available in Ballet (Cechetti and Imperial), Modern Ballroom and Old Time Dancing, Greek Dance and Natural Movement, Modern Stage Dance and National Dance. In some branches there are six grades of examination, from Primary to Grade V; in others only three grades, I to III, are organised. These examinations are designed as an introduction to the professional examinations of the branch, which would be the first qualification for stage or private teaching work (i.e. not in a maintained school).

(ii) MEDAL TESTS

These are arranged in Modern Ballroom, Latin-American and Old Time (Victorian and Sequence) Dancing for adults and children and, almost exclusively for children, in Greek Dance, Modern Stage, National Dance and Scottish Country Dance. The levels ascend from Bronze through Silver and Gold to Gold Star Award.

The Society states that 'an amateur who obtains the Gold Star can state, with pride, that he has achieved the highest medal test standard in the world'.

(iii) PROFESSIONAL EXAMINATIONS

These consist, in the Ballroom and related branches, of three syllabuses for Associate Membership and Fellowship status within the branches. In other branches, those which cover Ballet and Stage dancing, there is normally a student syllabus in three sections, Elementary, Intermediate and Advanced, granting Associate status. There is also a series of syllabuses for teachers in these branches leading to Membership, Licentiate and Fellowship status.

In most cases the Associate examination, which can be taken at a minimum age of 14 to 17 years according to the branch, is an assessment of dancing ability and technical theory. It does not test teaching skill. The later examinations, from Membership upward, include a test of teaching ability and can be taken only by those who have had a number of years' teaching experience.

The Royal Academy of Dancing
Holland Park Gardens, London, W.14

The R.A.D. produces syllabuses and conducts examinations in ballet for children at dancing classes ('Ballet in Education'), for individuals and for groups of older children ('Ballet in Further

Education'). Examinations are also conducted for professional dancers (Executant's Examinations) and for experienced private teachers (Advanced Teacher's Certificate).

The Royal Academy also runs a full-time teacher-training course, which is described below. This leads to 'qualified teacher' status and enables the holder to teach in a maintained school, as distinct from a private dancing school.

(i) AMATEUR EXAMINATIONS

Ballet in Education. This series of examinations is designed to mark the progress of the child who has one or two ballet classes each week. The grades run from Primary (for children of 6 to 10 years of age) through Grades I to V. All candidates for these grades must be under 18 years of age.

Ballet in Further Education. These examinations are taken by amateurs of at least 15 years of age. There are two sections, 'O' and 'A' level. Candidates are examined in small groups. Each group must contain children from the same dancing school taking the same level. The examinations are designed for young men and women who have passed Grade V or even the Elementary Executant's examination but have given up serious training for the profession and wish to maintain their level of dancing skill.

(ii) PROFESSIONAL EXAMINATIONS

Executant's Examinations. These examinations and the syllabuses which lead to them are geared to train and assess young people seeking to make a career in ballet.

Elementary Certificate. The Elementary examination represents the minimum knowledge of technique required by a student wishing to study ballet seriously—with the intention of becoming a teacher or dancer. The minimum age is 13 years and the examination admits successful candidates to student membership of the Academy.

The Intermediate Certificate examination is the membership examination of the R.A.D. The minimum age for entry is normally 15 years.

The Advanced Certificate examination is open to holders of the Intermediate Certificate. Students who have passed this examination and are over 18 years of age can apply to the committee of the Academy for election as an **Associate** and for permission to use the style **A.R.A.D.**

The Solo Seal is open to holders of the Advanced Certificate. It is intended for advanced students and young soloists.

The Advanced Teacher's Certificate. This examination is open to student members of the R.A.D. Candidates must be at least 23 years old and must have had not less than three years' teaching experience in a responsible position within the five years before the date of the examination.

This is a qualification for private teaching only.

The British Ballet Organisation

(incorporating the Operatic Dancing Teachers' Society)

Woolborough House

39, Lonsdale Road, Barnes, London, S.W.13

Graduated Certificates and Diplomas are awarded by the Organisation to qualified teachers of ballet, and examinations in the British Isles and overseas are conducted for students attending part- and full-time at schools of dancing in the following branches: Educational and Stage; Ballet; Dramatic Dance Action; Tap; Acrobatic.

QUALIFICATIONS GIVING 'QUALIFIED TEACHER' STATUS

Three-year full-time courses at the Royal Academy of Dancing, the London College of Dance and Drama and at the Art of Movement Studio are recognised by the Department of Education and Science as giving 'qualified teacher' status. The minimum entry qualifications for these courses are:

At the Royal Academy of Dancing

Candidates must have passed the Royal Academy of Dancing Preliminary examination and obtained 'O' level G.C.E. passes (or the equivalent) in English Language, English Literature and three other subjects including, if possible, Biology. French is not compulsory but students should have some knowledge of the language.

At the London College of Dance and Drama (8, Addison Road, London, W.14)

Candidates must have obtained 'O' level G.C.E. passes (or the equivalent) in English Language or English and three other subjects. Passes in French, History and Biology are desirable.

Preliminary dancing qualifications are not normally required by this college for students aiming at stage work, but, for this particular course aimed at teaching ballet,

students should be at about the Royal Academy of Dancing Elementary examination standard.

At the Art of Movement Studio (Woburn Hill, Addlestone, Surrey)

Candidates must have obtained 'O' level G.C.E. passes (or the equivalent) in five subjects including English Language or English.

DENTAL ANCILLARY STAFF

DENTAL AUXILIARY

Dental Auxiliaries work in the health service helping dentists to care for children's teeth.

The General Dental Council Certificate of Proficiency is awarded to girls who successfully complete a two-year full-time course in dental auxiliary work. Candidates for this course must be at least 17 years old and have passed G.C.E. 'O' level (or an equivalent examination) in four subjects, preferably including English Language, Mathematics and Science subjects. The course covers simple fillings, extraction of milk teeth, cleaning, scaling and polishing.

A maintenance grant is paid during the course, which can be taken only at the School for Dental Auxiliaries, New Cross Hospital, Avonley Road, London, S.E.14. (Applications should be made to the General Dental Council, 37, Wimpole Street, London, W.1.)

DENTAL HYGIENIST

Dental Hygienists work in national and local authority health services and in general practice under the direction of a registered dentist. They clean, scale and polish teeth, applying solutions to prevent decay, and advise on oral hygiene.

A roll of Dental Hygienists is kept by the General Dental Council and all dental hygienists must be entered in the roll. Two certificates only are accepted as qualifying for enrolment.

The Certificate of Proficiency in Oral Hygiene of the Ministry of Health.

The Certificate of Proficiency in Dental Hygiene of the Central Examining Board in Dental Hygiene.

These certificates are awarded to students who pass the examinations at the end of a one-year course in Dental Hygiene. Entry requirements for these courses are normally a good standard of

education, if possible G.C.E. (or an equivalent certificate) in about four subjects. Candidates must be at least 17 years old. Courses, which include a large amount of practical work, cover all aspects of oral hygiene. The following hospitals offer courses in Dental Hygiene:

The Dental Superintendent, Birmingham Dental Hospital, Great Charles Street, Birmingham, 3; The Secretary, Dental Hospital of Manchester, Bridgeford Street, Manchester, 15; The Director, Department of Preventive Dentistry, Guy's Hospital, London Bridge, London, S.E.1; The Director of Dental Studies, King's College Hospital Medical School, The Dental School, Denmark Hill, London, S.E.5; The Director, School of Dental Hygienists, Royal Dental Hospital, Leicester Square, London, W.C.2; The Secretary, The Royal Infirmary of Edinburgh and Associated Hospitals, Edinburgh, 3.

DENTAL TECHNICIANS

Dental Technicians are craft workers who make dental appliances. They usually work in a hospital, local authority or private laboratory making up appliances prescribed by a registered dentist.

Technicians train on the job; many take up a five-year term of articles of apprenticeship, as recommended by the National Joint Council for the Craft of Dental Technicians (British Dental Association, 13, Hill Street, Berkeley Square, London, W.1), who also administer a voluntary register of technicians.

While serving articles apprentices and other non-articled trainees attend day-release and evening classes to prepare for the City and Guilds of London Institute Certificates for Dental Technicians.

CITY AND GUILDS OF LONDON INSTITUTE CERTIFICATES

Dental Technician's Certificate (Subject No. 117). The examinations for this Certificate are taken in two parts: the Intermediate, taken after two to three years' study, and covering chemistry and physics, theory of dental mechanics, properties of dental materials, and practical dental mechanics; and the Final, covering the same subjects with the exception of chemistry and physics, and taken after two to three years' further study, i.e. at the end of a five-year training period. The examinations are practical as well as theoretical.

Dental Technician's Advanced Certificate (Subject No. 118). The examinations for this Certificate are taken after a period of further study. The Certificate may be taken in one of four sections:

- I Dental Ceramic and Crown Bridge Work.
- II Orthodontic Work.
- III Maxillo-Facial Work.
- IV General Dental Work.

The following colleges offer day-release and/or evening classes, normally following the syllabus of the C.G.L.I. course 117:

The Matthew Boulton Technical College, Birmingham; Bristol Technical College; Cornwall Technical College; Kingston-upon-Hull College of Technology; College of Technology, Leeds; Leicester College of Technology and Commerce; Walton Technical College, Liverpool; Borough Polytechnic; Moston College of Further Education, Manchester; Newcastle upon Tyne College of Further Education; College of Technology, Northampton; Norwich City College and Art School; People's College of Further Education, Nottingham; Sheffield College of Commerce and Technology; Southampton College of Technology; North Staffordshire College of Technology; Brooklands County Technical College, Surrey; Wulfrun College of Further Education, Wolverhampton; Llandaff Technical College, Cardiff; Frederick Street Further Education College, Aberdeen; James Gillespie's Commercial and Professional College, Edinburgh; Dundee Technical College; Langside College, Glasgow; Clydesdale College, Lanarkshire.

DENTAL SURGERY ASSISTANTS (OR DENTAL NURSES OR DENTAL RECEPTIONISTS)

Membership of British Dental Nurses' and Assistants' Society (Bank Chambers, 3, Market Place, Poulton, Blackpool) is open to all who work as surgery assistants, secretaries, receptionists or hygienists.

Dental Surgery Assistants work normally with dentists in private practice or in public dental services. Their duties might include booking appointments, keeping records, mixing fillings, helping with dental X-rays and other chairside work. Training is sometimes given by dentists themselves, but there are also courses of training at various dental and other hospitals. The normal entry requirements are a G.C.E. standard of education; usually candidates should be at least 17 to 18 years old and for some courses a knowledge of shorthand and typing is required.

The courses take the form of lectures, tutorials and practical work in various dental departments. A maintenance grant is paid during the course. Hospitals conduct their own Intermediate and Final

examinations and award **Certificates of Proficiency**. They may also prepare their students for **The Certificate 'A' Examination of the Examining Board for Dental Nurses and Assistants in Great Britain**.

The Examination of the Examining Board for Dental Surgery Assistants may be taken by those who have had at least two years' full-time experience in dental chairside assistant work or have taken one of the ten full-time courses given below.

The examination consists of written, oral and practical tests and covers elementary general and detailed dental anatomy and physiology; elementary knowledge of dental conditions and treatment—oral hygiene; use and care of equipment and drugs; preparation of filling and impression materials; X-rays; care of the patient; and dental records.

Full-time courses leading to the examination are available at:

Eastman Dental Hospital, Grays Inn Road, London, W.C.1.

12-month course. Candidates must be at least 17 years old.

Guy's Dental Hospital, London Bridge, London, S.E.1.

6-month course. Candidates must be at least 18 years old.

The London Hospital, Whitechapel, London, E.1.

12-month course. Candidates must be at least 17 years old.

Royal Dental Hospital of London, Leicester Square, London,

W.C.2. 12-month course. Candidates must be at least

17 years old.

The Dental Hospital, St. Mary's Row, Birmingham, 4.

The Dental Hospital, Lower Maudlin Street, Bristol, 1.

The Dental Hospital, Park Place, Dundee.

The Dental Hospital, Blundell Street, Leeds.

The Dental Hospital, Bridgeford Street, Manchester, 15.

Charles Clifford Dental Hospital, Wellesley Road, Sheffield,

10.

The last six courses are two years. Candidates must be at least 16 years old and have been educated to G.C.E. level. The first year is spent in classes and the second year in supervised work in all departments of the hospital.

For all the above courses, except the last, a small salary is paid to trainees and tuition is free.

Apart from these full-time courses, there are evening courses for assistants who wish to study for the examination while working for a private dentist at a large number of technical and other colleges, and day-release classes at Chiswick Polytechnic and Tottenham Technical College.

Training is also available in the Army, Royal Navy and Royal Air Force.

DENTISTRY

REGISTRABLE QUALIFICATIONS

In order to qualify as dental surgeons and to be placed on the Dental Register, in accordance with the provisions of the Dentists Act, 1957, students must obtain one of the following qualifications:

A first degree in Dental Surgery conferred by a university.

A diploma as a Licentiate in Dental Surgery conferred by a university.

A diploma as a Licentiate in Dental Surgery conferred by one of the Royal Colleges.

(i) DEGREES IN DENTAL SURGERY

The following universities confer the first degree of **Bachelor of Dental Surgery (B.D.S.)**. The length of the course is given in each case.

Belfast. B.D.S.: 5 years. Candidates should have G.C.E. 'A' level passes in at least Physics and Chemistry and 'O' level in Mathematics.

Birmingham. B.D.S.: $4\frac{1}{2}$ or $5\frac{1}{2}$ years. Candidates with three G.C.E. 'A' level passes, including Physics and Chemistry and either Biology or Zoology, may be admitted to a $4\frac{1}{2}$ -year course.

Bristol. B.D.S.: $4\frac{1}{2}$ or $5\frac{1}{2}$ years. Candidates with two G.C.E. 'A' level passes, including Chemistry, may be admitted to a $4\frac{1}{2}$ -year course.

Edinburgh. B.D.S.: 5 years. Candidates should have two S.C.E. Higher grade passes, preferably in Physics and Chemistry.

Glasgow. B.D.S.: 5 years. Candidates should have three S.C.E. Higher grade passes, preferably including Physics and Chemistry. Students may be exempted from the first year of the course on the results of *ad hoc* examinations if they already have good passes in Physics, Chemistry and Biology (or Botany or Zoology).

Leeds. B.Ch.D. (Bachelor of Dental Surgery): $4\frac{1}{2}$ or $5\frac{1}{2}$ years. Candidates with three G.C.E. 'A' level passes, including Physics and Chemistry, may be admitted to a $4\frac{1}{2}$ -year course; candidates with two 'A' level passes, which may be in arts subjects, may be admitted to a $5\frac{1}{2}$ -year course.

Liverpool. B.D.S.: $4\frac{1}{2}$ or $5\frac{1}{2}$ years. Candidates with three G.C.E. 'A' level passes, including Physics and Chemistry, may be admitted to a $4\frac{1}{2}$ -year course.

London (Guy's Hospital). B.D.S.: $4\frac{1}{2}$ or $5\frac{1}{2}$ years. Candidates with three G.C.E. 'A' level passes, including Physics and

Chemistry, may be admitted to a $4\frac{1}{2}$ -year course; candidates with two 'A' level passes, which may be in arts subjects, may be admitted to a $5\frac{1}{2}$ -year course.

London (King's College Hospital). **B.D.S.:** $4\frac{1}{2}$ years. Candidates should have three G.C.E. 'A' level passes, including Physics and Chemistry.

London (London Hospital). **B.D.S.:** $4\frac{1}{2}$ years. Candidates should have three G.C.E. 'A' level passes, including Physics and Chemistry.

London (Royal Dental Hospital). **B.D.S.:** $4\frac{1}{2}$ or $5\frac{1}{2}$ years. Candidates with three G.C.E. 'A' level passes, including Physics and Chemistry, may be admitted to a $4\frac{1}{2}$ -year course; candidates with two 'A' level passes, which may be in arts subjects, may be admitted to a $5\frac{1}{2}$ -year course.

London (University College Hospital). **B.D.S.:** $4\frac{1}{2}$ years. Candidates should have three G.C.E. 'A' level passes, including Physics and Chemistry.

Manchester. **B.D.S.:** $4\frac{1}{2}$ or $5\frac{1}{2}$ years. Candidates with three G.C.E. 'A' level passes, including Physics and Chemistry, may be admitted to a $4\frac{1}{2}$ -year course; exceptionally, candidates with two good 'A' level passes in arts subjects may be admitted to a $5\frac{1}{2}$ -year course.

Newcastle. **B.D.S.:** 5 or 6 years. Candidates with three G.C.E. 'A' level passes, including Physics and Chemistry, may be admitted to a 5-year course; candidates with two 'A' level passes, which may be in arts subjects, may be admitted to a 6-year course.

Sheffield. **B.D.S.:** 4 or 5 years. Candidates with three G.C.E. 'A' level passes, including Physics and Chemistry, may be admitted to a 4-year course; candidates with two good passes in non-science subjects, and with 'O' level passes in Physics, Chemistry and Biology, may be admitted to a 5-year course.

St. Andrews. **B.D.S.:** 5 years. Candidates should have S.C.E. Higher grade passes in Physics and Chemistry and an Ordinary grade pass in Mathematics.

Wales. **B.D.S.:** $4\frac{1}{2}$ or $5\frac{1}{2}$ years. Candidates should have three G.C.E. 'A' level passes, including Physics and Chemistry; clinical courses are taken at the Welsh National School of Medicine.

(ii) DIPLOMA AS A LICENTIATE IN DENTAL SURGERY CONFERRED BY A UNIVERSITY (L.D.S.)

The L.D.S. is awarded by some of the universities which confer first degrees in dental surgery. In some cases, students reading for the Bachelor's degree may be transferred to an L.D.S. course; in others, they may receive the diploma of L.D.S. on the results of

their degree examinations. Students are normally encouraged to set out on a degree in preference to a diploma course, as the possession of a degree is thought to be an advantage, especially for research and specialist work later. L.D.S. courses are usually six months shorter than degree courses.

The following universities confer the Licentiate in Dental Surgery:
Belfast; Birmingham; Bristol; Leeds; Liverpool; Manchester;
Newcastle; Sheffield; St. Andrews.

(iii) DIPLOMA AS A LICENTIATE AWARDED BY THE ROYAL COLLEGES

Licentiate in Dental Surgery of the Royal College of Surgeons of England (L.D.S.R.C.S.Eng.). The course lasts four years. Candidates are required to pass two examinations:

The First Examination: Part I—Anatomy and Physiology; Part II—Special Anatomy and Physiology.

The Final Examination: Part I—Surgery, Medicine, Pathology and Bacteriology; Part II—Dental Prosthetics; Part III—Dental Surgery and Pathology.

Before being allowed to take the First Professional Examination candidates must produce evidence that they have passed examinations in general education and in physics, chemistry and biology or zoology entitling them to begin the course of instruction for dental students at a dental school recognised by the Royal College for the purpose (*see below*). Candidates are required to take the courses of instruction and to attend hospital practice at recognised dental schools and hospitals.

The study required for Part I of the First Examination and Part I of the Final Examination may be taken at any of the medical schools and hospitals recognised by the English Conjoint Board for the L.R.C.P., M.R.C.S. (*see page 797*). The study required for Part II of the First Examination and Parts II and III of the Final Examination may be taken at any of the dental schools and hospitals associated with the universities and colleges whose qualifications in dental surgery are registrable in the British Dentists' Register. The British establishments are:

Queen's University, Belfast; University of Birmingham;
University of Bristol; University of Edinburgh; University of Glasgow; University of Leeds; University of Liverpool; University of London (Guy's, King's College, London, Royal Dental, University College Hospitals Dental Schools); University of Manchester; University of Newcastle; University of Sheffield; University of St. Andrews; Royal College of Surgeons of Edinburgh; Royal College of Physicians and Surgeons of Glasgow.

Licentiate in Dental Surgery of the Royal College of Surgeons of Edinburgh (L.D.S.R.C.S.Edin.). The course lasts four years. Candidates are required to pass three examinations:

The First Professional Examination: a written, oral and practical examination in Biology, Anatomy and Physiology.

The Second Professional Examination: Part I—a written and oral examination in General Pathology and Bacteriology; Part II—a written and oral examination in Physics of Radiation and a written, practical and oral examination in Radiology applied to Dentistry; Part III—a written and oral examination in Dental Mechanics, including the properties of Dental Materials and Dental Mechanics, and a practical examination in Dental Mechanics.

The Final Professional Examination: Part I—a written and oral examination in General Medicine and General Surgery; Part II—a written and oral examination in Dental Anatomy and Dental Physiology, Dental Surgery and Dental Pathology, including Histo-Pathology, Pharmacology and Dental Therapeutics; practical examination in Operative Dental Surgery, Oral Diagnosis, Administration of Anaesthetics, Extraction, Orthodontics and Prosthetic Dentistry.

Candidates must have been registered with the Dean of the Royal College or with their dental school for four years before being admitted to the Final Examination and must be not less than 21 at the time of the Final Examination. Before registration candidates must have passed a recognised preliminary examination in general education, including English, elementary mathematics, a foreign language and one other specified subject.

Candidates must also produce certificates indicating that they have taken a course of instruction at a recognised dental school.

Licentiate in Dental Surgery of the Royal College of Physicians and Surgeons of Glasgow (L.D.S.R.C.P.S.Glas.). The course lasts 30 months (dental subjects). Candidates are required to pass four examinations:

The First Professional Examination: Anatomy, Physiology and Biochemistry.

The Second Professional Examination: Dental Mechanics and Dental Materials.

The Third Professional Examination: Medicine, Surgery, Pathology and Bacteriology.

The Final Examination: Dental Anatomy and Dental Physiology; Dental Surgery, Dental Pathology, Dental Prosthetics, Conservative and Operative Dentistry.

Intending students must have as evidence of their general education the Scottish Universities Entrance Board Certificate of Fitness and must pass a preliminary examination in natural sciences (Biology, Inorganic and Organic Chemistry, and Physics).

The examinations for the Licentiate are open to students taking recognised dental courses; candidates who have passed the corresponding examinations in their own establishments may be exempted from the First, Second and Third Examinations.

HIGHER QUALIFICATIONS

Additional qualifications registrable in accordance with the Dentists Act, 1957, are as follows:

Higher degrees in Dental Surgery.

Diplomas of the Royal Colleges of Surgeons of England and Edinburgh and of the Royal College of Physicians and Surgeons of Glasgow.

Diploma in Public Dentistry.

(i) HIGHER DEGREES

The higher degree awarded by most of the universities which confer a first degree is that of Master of Dental Surgery (M.D.S. or, at Leeds, M.Ch.D.). The degree is usually awarded to dental graduates of a few years' standing on the results of an examination and thesis. Three universities award a higher doctorate (Doctor of Dental Surgery, D.D.S., or Doctor of Dental Science, D.D.Sc.). It is also possible at some universities to take a Ph.D. in dentistry.

Master of Dental Surgery (M.D.S.): degrees are awarded by the following universities:

Belfast; Birmingham; Bristol; Edinburgh; Glasgow; Leeds (M.Ch.D.); Liverpool; London; Manchester; Newcastle; Sheffield; St. Andrews.

Doctor of Dental Surgery (D.D.S.) and Doctor of Dental Science (D.D.Sc.): degrees are awarded by the following universities:

Manchester (D.D.S.); Newcastle (D.D.Sc.); St. Andrews (D.D.Sc.).

Doctor of Philosophy. The universities of Edinburgh and London award the degree of Ph.D. in dentistry.

Note. The University of London formerly awarded the degree of Master of Surgery (Dental Surgery) (M.S. (Dent.)), which has now been discontinued.

(ii) HIGHER QUALIFICATIONS AWARDED BY THE ROYAL COLLEGES

The Royal College of Surgeons of England (Lincoln's Inn Fields, London, W.C.2) awards in addition to the primary qualification of Licentiate in Dental Surgery (L.D.S.R.C.S.Eng.) the following postgraduate qualifications.

Diploma of Fellow in Dental Surgery (F.D.S.R.C.S.Eng.). Candidates for admission to the Fellowship examination must have registrable dental qualifications. The diploma may not be awarded to candidates under 25, although candidates below that age may take the Final Examination.

There are two examinations, Primary and Final. Candidates who have passed a comparable examination of one of the other Royal Colleges may be exempted from the Primary Examination.

The Primary Examination, which is partly written and partly oral, covers applied anatomy, including the anatomy and histology of the teeth and jaws, applied physiology and the principles of pathology of importance in dental surgery.

The Final Examination, which is partly written, partly oral and partly clinical, covers surgery, oral pathology and bacteriology, and dental surgery. Candidates must have been in practice for three years since obtaining their primary qualification and have held for not less than one year a full-time hospital appointment or appointments approved by the Council for the purpose.

Diploma in Orthodontics (D.Orth.R.C.S.Eng.). Candidates for admission to the Diploma examination must have registrable dental qualifications.

The subjects of the examination are:

- (a) The general anatomy of the head and neck with special reference to the development and function of the masticatory apparatus. The principles of human physiology with special reference to the factors influencing the development and growth of the jaws and teeth and the physiology of mastication and deglutition.
- (b) Aetiology, diagnosis, prognosis and treatment of abnormal growth and development of the jaws, abnormal relations of the dental arches, and all forms of irregularity in the position of the teeth.

The examination in section (a) is written and oral and in section (b) written, oral, clinical and practical.

Candidates must have been in practice for at least two years after obtaining their primary qualification, have held for not less than six months a full-time hospital appointment or appointments providing general dental experience approved by the Council for the

purpose and have held an approved full-time orthodontic post in a recognised hospital for not less than one year or have held an approved part-time post in a recognised orthodontic department of a hospital.

The Royal College of Surgeons of Edinburgh (Edinburgh, 8) awards in addition to the primary qualification of Licentiate in Dental Surgery (L.D.S.R.C.S.Edin.) the postgraduate qualification of **Fellowship in Dental Surgery (F.D.S.R.C.S.Edin.)**, which superseded the College's **Higher Dental Diploma (H.D.D.R.C.S.Edin.)** in 1949.

The examination is in two parts, I and II. Part I consists of a written paper and an oral examination in applied anatomy, the principles of physiology and the principles of pathology including bacteriology.

Part II consists of a written paper, a clinical and an oral examination on the principles and practice of dental surgery, oral pathology and surgery applied to dentistry.

Candidates may be admitted to Part I of the examination at any time after obtaining a qualification in dentistry recognised by the College. Candidates who have passed Part I may be admitted to Part II after being engaged in dental practice for at least three years and having held a dental appointment in a recognised hospital for not less than a year.

The Royal College of Physicians and Surgeons of Glasgow (242, St. Vincent Street, Glasgow, C.2) awards the following diplomas.

Higher Dental Diploma (H.D.D.R.C.P.S.Glas.). The Diploma is an additional qualification for registered dentists and is awarded to candidates who pass the required examinations and have been in practice for at least a year since qualifying. Candidates must also have completed one year full-time or two years part-time working in a dental hospital or the dental department or maxillo-facial department of a general hospital recognised by the Royal College.

There are written, practical, clinical and oral examinations in the following subjects:

Dental Anatomy and Physiology and Biochemistry; Dental Surgery and Oral Surgery; Dental Pathology and Bacteriology.

Diploma in Dental Orthopaedics (D.D.O.R.C.P.S.Glas.). Candidates for the Diploma must be not less than 25 and have been qualified for at least two years. They must have held not less than a six-month full-time hospital appointment offering approved general dental experience and have been engaged in the full-time

practice of dental orthopaedics for at least one year in an approved hospital or institution; or they must have been engaged in the part-time practice of dental orthopaedics in an approved hospital or institution for a period equivalent to one year full-time.

The examination consists of a written examination and an oral examination in applied anatomy and physiology of the head and neck and embryology; and a written, practical, clinical and oral examination in dental orthopaedics.

Candidates who have obtained the Higher Dental Diploma or who have passed the Primary Examination for the Fellowship in Dental Surgery of the Royal Colleges of Surgeons of Edinburgh or England are exempt from the examination in applied dental anatomy and physiology.

The Diploma is an additional qualification for registered dentists.

The Diploma in Public Dentistry (D.P.D. U.St.And.) is awarded by the University of St. Andrews to candidates who have been qualified dentists for not less than a year and have passed an examination in Bacteriology, health services administration, public dentistry, the principles and practice of preventive dentistry, dental jurisprudence, Orthodontics and child health.

SUMMARY OF DENTAL QUALIFICATIONS

<u>Awarded by</u>	<u>Title</u>	<u>Designatory Letters</u>
Queen's University, Belfast	Licentiate in Dental Surgery	L.D.S. Q.U.Belf.
	Bachelor of Dental Surgery	B.D.S. Q.U.Belf.
	Master of Dental Surgery	M.D.S. Q.U.Belf.
University of Birmingham	Licentiate in Dental Surgery	L.D.S. U.Birm.
	Bachelor of Dental Surgery	B.D.S. U.Birm.
	Master of Dental Surgery	M.D.S. U.Birm.
University of Bristol	Licentiate in Dental Surgery	L.D.S. U.Brist.
	Bachelor of Dental Surgery	B.D.S. U.Brist.
	Master of Dental Surgery	M.D.S. U.Brist.
University of Edinburgh	Bachelor of Dental Surgery	B.D.S. U.Edin.
	Master of Dental Surgery	M.D.S. U.Edin.
	Master of Dental Surgery	M.D.S. U.Edin.
University of Glasgow	Bachelor of Dental Surgery	B.D.S. U.Glas.
	Master of Dental Surgery	M.D.S. U.Glas.
	Licentiate in Dental Surgery	L.D.S. U.Leeds
University of Leeds	Bachelor of Dental Surgery	B.Ch.D. U.Leeds
	Master of Dental Surgery	M.Ch.D. U.Leeds
	Licentiate in Dental Surgery	L.D.S. U.Liv.
University of Liverpool	Bachelor of Dental Surgery	B.D.S. U.Liv.
	Master of Dental Surgery	M.D.S. U.Liv.
	Master of Dental Surgery	M.D.S. U.Lond.
University of London	Bachelor of Dental Surgery	B.D.S. U.Lond.
	Master of Dental Surgery	M.D.S. U.Lond.
	Master of Surgery (Dental Surgery) (discontinued)	M.S.(Dent.) U.Lond.
University of Manchester	Licentiate in Dental Surgery	L.D.S. U.Manc.
	Bachelor of Dental Surgery	B.D.S. U.Manc.
	Master of Dental Surgery	M.D.S. U.Manc.
	Doctor of Dental Surgery	D.D.S. U.Manc.

<u>Awarded by</u>	<u>Title</u>	<u>Designatory Letters</u>
University of Newcastle	Licentiate in Dental Surgery	L.D.S. U.Newc.
	Bachelor of Dental Surgery	B.D.S. U.Newc.
	Master of Dental Surgery	M.D.S. U.Newc.
	Doctor of Dental Science	D.D.Sc. U.Newc.
University of Sheffield	Licentiate in Dental Surgery	L.D.S. U.Sheff.
	Bachelor of Dental Surgery	B.D.S. U.Sheff.
	Master of Dental Surgery	M.D.S. U.Sheff.
University of St. Andrews	Licentiate in Dental Surgery	L.D.S. U.St.And.
	Bachelor of Dental Surgery	B.D.S. U.St.And.
	Master of Dental Surgery	M.D.S. U.St.And.
	Doctor of Dental Science	D.D.Sc. U.St.And.
	Diploma in Public Dentistry	D.P.D. U.St.And.
University of Wales	Bachelor of Dental Surgery	B.D.S. U.Wales
National University of Ireland	Bachelor of Dental Surgery	B.D.S. N.U.Irel.
Trinity College, Dublin	Master of Dental Surgery	M.D.S. N.U.Irel.
	Licentiate in Dental Science	L.Dent.Sc. U.Dubl.
	Bachelor of Dental Science	B.Dent.Sc. U.Dubl.
	Master of Dental Science	M.Dent.Sc. U.Dubl.
Royal College of Surgeons of Edinburgh	Licentiate in Dental Surgery	L.D.S.R.C.S.Edin.
	Fellowship in Dental Surgery	F.D.S.R.C.S.Edin.
	Higher Dental Diploma (discontinued)	H.D.D.R.C.S.Edin.
Royal College of Surgeons of England	Licentiate in Dental Surgery	L.D.S.R.C.S.Eng.
	Fellowship in Dental Surgery	F.D.S.R.C.S.Eng.
	Diploma in Orthodontics	D.Orth.R.C.S.Eng.
Royal College of Physicians and Surgeons of Glasgow	Licentiate in Dental Surgery	L.D.S.R.C.P.S.Glas.
	Higher Dental Diploma	H.D.D.R.C.P.S.Glas.
	Diploma in Dental Orthopaedics	D.D.O.R.C.P.S.Glas.
Royal College of Surgeons in Ireland	Licentiate in Dental Surgery	L.D.S.R.C.S.Irel.

DIETETICS

(See note on State Registration, page 790.)

The British Dietetic Association

251, Brompton Road, London, S.W.3

To qualify for **Membership**, and for registration with the Dietetic Board of the Council for Professions Supplementary to Medicine, a candidate must hold the Diploma in Dietetics of a recognised institution or the Degree in Dietetics of Battersea College of Technology. **State Registered Dietitians** may use the letters S.R.D.

Affiliate Members are members working in allied fields. New elections to this category were discontinued some years ago.

Honorary Members are elected for distinguished service in Medicine, Nutrition and other fields.

DEGREE AND DIPLOMAS

The Integrated Catering and Dietetic Diploma: 3 or 4 years. The full-time courses include a six-month period in a hospital dietetics department. To qualify for a three-year course a student must normally have passed 'A' level G.C.E. (or S.C.E.) in two science subjects.

The entry qualifications required by the British Dietetic Association are either G.C.E. 'O' level passes in five subjects or three 'O' and one 'A' level pass including English Language and preferably Chemistry and Mathematics or S.C.E. Ordinary Grade passes in five subjects or three Ordinary and one Higher Grade pass including English and preferably a science (including Chemistry) and Mathematics. In each case if a candidate has not obtained a pass in Chemistry he must take an entrance test in Chemistry set by the hospital or college providing the course.

Courses are provided at the following colleges:

Battersea College of Technology; Ealing Technical College (4 or 3 years); Leeds College of Technology (4 or 3 years); Llandaff Technical College, Cardiff (4 or 3 years); St. Mary's College of Catering and Domestic Science, Dublin (4 years); Robert Gordon's Technical College, Aberdeen (4 years).

Dietetic Diploma. The 18-month course at Battersea C.A.T. is for candidates with certain preliminary qualifications (certain university degrees, S.R.N., I.M.A. qualifications). There is also a 3½-year part-time course at Northern Polytechnic, London.

Battersea C.A.T. B.Sc. Hons. in Dietetics: 4 years including 1 year of professional training. 3 'A' level passes in science (including Chemistry) are preferred entry requirement.

DOMESTIC SCIENCE

Association of Home Economists of Great Britain

White Ladies, Ewell, Surrey

The Home Economics Diploma is an advanced, though not degree level, qualification for women who wish to work in experimental, advertising, advisory and publicity fields, or in demonstrating and lecturing for manufacturers of food and kitchen equipment.

The course includes science, household skills and social studies. The minimum entry requirements are certain 'O' and 'A' level passes or the equivalent.

Three-year courses for the Diploma are available at:

West of Scotland College of Domestic Science, Glasgow;

Isleworth Polytechnic; Northern Polytechnic.

The Institutional Management Association

Swinton House, 324, Grays Inn Road, London, W.C.1

The Diploma in Institutional Management is the highest of the I.M.A.'s qualifications and is taken after a three-year full-time course. The course covers administration, organisation of work and equipment, service of meals, store keeping, laundry methods, building, fuels, costing, staff management, large-scale catering, needlework, applied art and home nursing. Supervised practical work outside the college. Diploma holders would be qualified to run the whole domestic organisation of a large hostel, college or school. They would also be qualified in certain cases for entry to a further course for a Dietetics Diploma (*see* section on Dietetics).

The minimum entry qualifications for the Diploma in Institutional Management are certain 'O' or 'A' level passes, or the equivalent. The minimum age of admission is normally 18.

Courses for the Diploma are available at:

Birmingham College of Food and Domestic Arts; Gloucestershire Training College; Yorkshire Training College of Housecraft, Leeds; Leicester Domestic Science College; Mid-Essex Technical College and School of Art; Northern Polytechnic; Newcastle College of Further Education; Highbury Technical College, Portsmouth; Elizabeth Gaskell College, Manchester; Sheffield College of Technology; Shropshire College of Domestic Science and Dairy Work; Edinburgh College of Domestic Science; College of Domestic Science, Aberdeen; Robert Gordon's Technical College, Aberdeen; Belfast College of Domestic Science.

Certificate in Institutional Housekeeping and Catering.

Taken at the end of a two-year full-time course designed to train the practical girl for a post as housekeeper-caterer in large establishments or as a supervisor in the School Meals Service. The syllabus covers domestic organisation, care of equipment, cleaning materials, business affairs, catering, health education, needlework,

laundry and first aid. The Certificate is also a qualification for entry to some Dietetics courses.

Students must be at least 17 at the beginning of the course and should have obtained four G.C.E. 'O' level passes in certain subjects.

Colleges offering courses for the Certificate are:

Bath Technical College; Birmingham College of Food and Domestic Arts; Bristol Technical College; Slough College; Denbighshire Technical College; Eastbourne College of Further Education; Mid-Essex Technical College; Letchworth College of Technology; Huddersfield College of Technology; Hull College of Technology; Isle of Wight Technical College; Yorkshire Training College of Housecraft, Leeds; Liverpool College of Crafts and Catering; Borough Polytechnic; Northern Polytechnic; Westminster Technical College; Elizabeth Gaskell College, Manchester; Newcastle College of Further Education; Norwich City College; Plymouth College of Housecraft; Highbury Technical College, Portsmouth; Sheffield College of Technology; Shropshire College of Domestic Science and Dairy Work; The Elms Technical College, Stoke-on-Trent; Guildford County Technical College; Worthing College of Further Education.

Matron-Housekeeper's Certificate. Two-year full-time course for which there are no specific entry requirements although candidates are expected to have a good standard of general education and must be at least 17½ years old. The Certificate qualifies the holder for work in small communities of children, preparatory schools or children's homes.

Colleges offering courses for the Certificate:

Bristol Technical College; Exeter Technical College; Oxford College of Further Education; Plymouth College of Housecraft.

Certificate in Institutional Management. This qualification is comparable in standard to the Diploma in Institutional Management and is taken at the end of a one-year full-time abridged course, geared especially to the needs of students over 25; graduates may be admitted to the course rather younger. Applicants need good professional qualifications or considerable practical experience and a reasonable standard of education. The syllabus covers domestic administration, large-scale catering, science applied to health, accounting and home nursing.

Details of these courses may be obtained from the I.M.A.

National Council for Domestic Studies
75, Ferne Park Road, Crouch End, London, N.8

(i) CERTIFICATES DESIGNED FOR SCHOOLS

Junior Homecraft Certificate. Taken by girls at the end of a normal secondary school course. The syllabus includes laundering and household routine as well as cookery. Practical and theoretical tests are taken.

Junior Needlework Certificate. This certificate is similar in standard to the Junior Homecraft Certificate. The First Examination is taken after a two- to three-year course, the Second Examination after a further two years. The syllabus covers pattern adaptation, garment construction, mending and fine needlework.

Preliminary Housecraft Certificate. Designed for girls of 15 to 17 years of age and the standard is comparable with that required for the G.C.E. 'O' level Housecraft course. The syllabus covers care of furnishing, cookery and laundry.

(ii) CERTIFICATES LEADING TO SPECIALISED CAREERS

The Housecraft Certificate can be taken as part of the school course, but is mainly taken by students who have completed a full-time course of at least one year at a technical college. Candidates must be at least 17.

The course can in itself form a qualification for posts as junior assistant to matrons, cooks and housekeepers in schools and other establishments. It also forms the first year of training for three other certificates of the Council, the Demonstrator's Certificate; the Housekeeping and Catering Certificate and the Cook's Professional Certificate (*see below*). A theoretical paper on nutrition, menu planning and cookery and two sections of practical tests make up the examination.

The Council offers also a **Science Syllabus** which is supplementary to the Housecraft Certificate. All candidates proceeding to the Demonstrator's Certificate must pass this paper and it is to be compulsory for all Certificate candidates from 1965.

Institutional Cookery. Taken by students with 'a good fundamental knowledge of cookery in large-scale work' after a three-month course which covers institutional catering with variations suitable for hospitals, schools and canteens. The examination is practical only.

Cookery Certificate. This course is intended for girls of 16

and over. It is of a higher standard than the Housecraft Certificate. The syllabus covers cookery processes, storage of food, kitchen management and hygiene.

The Cook's Professional Certificate is suitable for women and girls who wish to take up cooking as a career. It is recognised by the Ancillary Staffs Council of the Ministry of Health for additional increments to salary. The course normally extends over 600 hours and covers menu planning, costing, stores control and preparation of food.

The examination is open to students who have reached a good standard in the Council's Housecraft or Cookery examination or an equivalent examination. The examination takes the form of a practical test.

Housekeeping and Catering Certificate. Taken after a one-year course, this is open to students who have obtained the Council's Certificate in Housecraft and to adult candidates after a qualifying test.

The certificate is suitable for girls who wish to work as assistant housekeepers and caterers in schools, hostels, hospital clubs and other institutions. It is recognised by the Ancillary Staffs Council of the Ministry of Health as a qualification for salary increments.

The examination includes a theory paper and a practical test and the syllabus covers Nutrition, Catering and Cookery, Institutional Management and Administration.

Candidates must hold a St. John's Ambulance or Red Cross First Aid Certificate.

Demonstrator's Certificate. Taken after a full-time course of at least two years, this is suitable for 'students aiming at a career in demonstrating in industry and commerce'. Entry qualifications are passes in three G.C.E. 'O' level subjects.

In Part I of the course candidates take the basic training and the Science Syllabus leading to the Council's Housecraft Certificate.

In Part II they cover Cookery and Nutrition, House Management, Office Administration and Demonstration and Salesmanship.

Candidates must normally be at least 18 years old when they enter the final year of the course.

The Certificate is accepted as a qualification for entry to the Certificate of the Electrical Association for Women in Electrical Housecraft for Demonstrators. It is also accepted as a qualification for demonstrating work 'by the Gas Industry and other Industrial undertakings'.

Electrical Association for Women

25, Foubert Place, London, W.1

The Certificate in Electrical Housecraft for Demonstrators. Two-year full-time course at a technical or domestic science training college usually taken as a supplementary certificate for students whose course has led to an acceptable qualification in domestic science.

The following qualifications are recognised by the E.A.W. Training and Diploma Committee for candidates entering the Certificate Examination:

National Council for Domestic Studies, Demonstrator's Certificate.

National Council for Domestic Studies, Housekeeping and Catering Certificate.

C.G.L.I. Certificates 244 and 245 (*see* next section).

An Institutional Management or Institutional Housekeeping Certificate awarded by a recognised college after a two-year course.

The National Certificate in Institutional Management and Catering.

The C.G.L.I. Certificates 1512 and 245. (Cookery for Hotels and Catering Establishments; Home Management.)

The syllabus covers generation and distribution of electricity, wiring, repairs and electrical heating and cooking.

The Diploma in Electrical Housecraft. Candidates for the Diploma must hold the E.A.W. Certificate and produce evidence of demonstrating and sales experience in the electrical industry for at least four years. They must not be less than 21 years of age.

The examination takes the form of a 60-minute practical demonstration in either cookery or laundry or a combination of the two, an extempore demonstration on an electrical appliance at the choice of the examiner and a viva voce examination.

The Diploma is awarded in the following classes: '1st Class with distinction', '1st Class' and '2nd Class'.

UNIVERSITY DEGREES

Degree courses are offered at the following universities.

Bristol. B.Sc.(Dom.Sc.): 3 years. Entrance requirements are G.C.E. 'A' level Chemistry and either Botany or Zoology, or Biology or Physics. All students must have some previous knowledge of Physics.

London (Queen Elizabeth College). B.Sc. (Household

Science): normally 3 years. Candidates should have G.C.E. passes in Chemistry, Physics, Biology or Zoology and Mathematics. Chemistry and either Physics or Biology or Zoology must be at 'A' level.

CITY AND GUILDS OF LONDON INSTITUTE CERTIFICATES

Examinations are held for the following **Domestic Science Certificates**:

Domestic Cookery (No. 243).

Advanced Domestic Cookery (No. 244).

Home Management (No. 245). (Candidates for this qualification must have passed in Domestic Cookery No. 243.)

CERTIFICATES OF THE REGIONAL EXAMINING UNIONS

(i) EAST MIDLAND EDUCATIONAL UNION

Certificate in Household Cookery. This is a practical and oral examination. The syllabus covers kitchen routine, nutrition, hygiene, buying and cookery methods. First and second class passes are awarded and the certificate indicates that the student has reached 'a reasonable standard of proficiency' in the subject studied.

(ii) UNION OF LANCASHIRE AND CHESHIRE INSTITUTES

The Union conducts examinations for Certificates in Cookery, Institutional Housekeeping, Home Nursing and Laundry work.

(iii) NORTHERN COUNTIES TECHNICAL EXAMINATIONS COUNCIL

The Council awards Certificates in Housecraft and in Household Cooking, the level of which corresponds with the level of the C.G.L.I. certificate in Domestic Cookery.

(iv) UNION OF EDUCATIONAL INSTITUTIONS

An examination is conducted on Food, i.e. planning, preparation and budgeting for cooking.

SCOTTISH QUALIFICATIONS

College of Domestic Science, Robert Gordon's Technical College, Aberdeen: a post-Diploma course in Advanced Cookery.

COLLEGE DIPLOMA COURSES

Three-year full-time courses lead to these qualifications. The standard is about that of the Pass Degree and the entry requirements are two S.C.E. Higher grade and three G.C.E. Ordinary grade passes. The syllabus includes cookery, laundry work and household management.

College Diplomas in Domestic Science are available at:

College of Domestic Science, Robert Gordon's Technical College, Aberdeen; Edinburgh College of Domestic Science; Glasgow and West of Scotland College of Domestic Science.

College Diploma in High Class Cookery: awarded by Edinburgh College of Domestic Science.

College Diploma and Demonstrator's Certificate in Household/Institutional Management: awarded by Edinburgh College of Domestic Science.

College Diploma in Household Management: awarded by Edinburgh College of Domestic Science.

COLLEGE CERTIFICATES

These are of a lower standard than the College Diploma Courses.

College Certificates in Household Management: awarded by Glasgow and West of Scotland College of Domestic Science and Edinburgh College of Domestic Science.

College Demonstrator's Certificates: awarded by the following:

College of Domestic Science, Robert Gordon's Technical College, Aberdeen; Edinburgh College of Domestic Science; Glasgow and West of Scotland College of Domestic Science.

College Certificates in High Class Cookery: awarded by Edinburgh College of Domestic Science and Glasgow and West of Scotland College of Domestic Science.

College Certificates in Advanced Cookery: awarded by College of Domestic Science, Robert Gordon's Technical College, Aberdeen, and Glasgow and West of Scotland College of Domestic Science.

NORTHERN IRELAND

Cook Catering Certificate Course: offered at the City of Belfast College of Domestic Science, this is awarded after a full-time one-year course at the college and a further period of one year spent as an assistant in a hospital or other catering departments.

Candidates for the course must be at least 16 years old; there are no specified educational entry requirements. The course covers Theory and Practice of Cookery, English and Business Methods. Holders of the Certificate who work in hospitals and other large-scale catering establishments are entitled to receive an extra allowance.

DRAMATIC ART

UNIVERSITY DEGREES AND DIPLOMAS

(i) FIRST DEGREES

Birmingham. B.A. Combined Honours: 3 years. Drama and Theatre Arts may be combined with one other subject for a B.A. Combined Honours Degree. The other subject may be any one of the following:

English; French; Geography; German; Greek (Ancient or Modern); Italian; Latin; Mathematics; History; Music; Philosophy; Physical Education; Psychology; Russian; Sociology; Spanish; Theology.

Entry requirements: passes in three subjects at 'A' level obtained at one examination.

Bristol. B.A. Special Honours: 3 years. Special Honours degrees may be obtained in the following combinations of subjects:

Drama and Classics; Drama and English; Drama and French; Drama and German; Drama and Spanish.

Entry requirements: two 'A' level passes must be obtained and a pass in Latin or Classical Greek, at 'O' or 'A' level, must be included.

Hull. B.A. Joint Honours: 3 years. The degree may be obtained in Drama and one of the following subjects:

American Studies; English; French; German; Greek; Italian; Latin; Music; Russian; Spanish; Swedish; Theology.

Manchester. B.A. with Honours: 3 years. The degree may be obtained in the following subjects:

Drama; English and Drama; French and Drama; German and Drama.

Entry requirements: two 'A' level passes must be offered and a pass in Latin or Classical Greek, at 'O' or 'A' level, is usually required.

(ii) POSTGRADUATE QUALIFICATIONS

University of Bristol. Certificate in Drama: this is a one-year postgraduate course.

University of Manchester. Diploma in Drama: this is a one-year postgraduate course.

University of Glasgow. Diploma in Dramatic Studies: this is a two-year course for arts graduates who have gained the Diploma in Dramatic Art or the Diploma in Speech and Drama awarded by the Royal Scottish Academy of Music. Examination is by dissertation.

(iii) UNIVERSITY DIPLOMAS AND CERTIFICATES

University Diploma in Dramatic Art. This qualification is taken by students at certain drama colleges after a three-year full-time course. Entry requirements for these courses are usually G.C.E. passes in five 'O' level subjects including English and science, and one or more passes at 'A' level in G.C.E. Entrants must be at least 18 years old.

Courses are offered at the following colleges:

College of Dramatic Art, Glasgow; Central School of Speech and Drama, London; New College of Speech and Drama, London.

University of Glasgow. Certificate in Dramatic Art: this is taken after a three-year full-time course. Candidates must be full-time students of the College of Dramatic Art; candidates must have passed the examinations for the Diploma in Dramatic Art or the Diploma in Speech and Drama awarded by the College.

University of London. Certificate of Proficiency in Diction and Drama: this is awarded after a one-year supplementary course for qualified teachers at the Central School of Speech and Drama. The syllabus includes voice training, history of drama, acting, production, verse speaking and other drama subjects.

QUALIFICATIONS GRANTED BY INDIVIDUAL COLLEGES

Stage Training. Some drama schools have courses for children and provide ordinary education along with stage training. Most also accept girls and boys from the age of 17 or 18 years for a three-year full-time course in drama leading to a college Certificate or Diploma. There are no academic entry requirements for these courses and selection is by audition.

Teaching Diploma. Some of these three-year courses are geared to teaching and lead to a teaching diploma. Students who take these courses with the aim of teaching in maintained schools must have passed 'O' level G.C.E. (or the equivalent) in five subjects including English language before starting the specialist course.

The Principal Colleges offering Drama Courses. (Those marked with an asterisk (*) offer courses for **Teaching Diplomas** which are recognised by the Department of Education and Science as conferring 'qualified teacher' status as well as other courses for stage training.)

Bristol Old Vic Theatre School, 2, Downside Road, Clifton, Bristol, 8.

*Rose Bruford College of Speech and Drama, Lamorby Park, Sidcup, Kent.

*Central School of Speech and Drama, Embassy Theatre, Swiss Cottage, London, N.W.3.

*Guildhall School of Music and Drama, John Carpenter Street, London E.C.4. The School awards the **Associate-ship of the Guildhall School of Music and Drama (A.G.S.M.)**, which gives qualified teacher status if awarded not later than 1959.

London Academy of Music and Dramatic Art, Tower House, Cromwell Road, London, S.W.5.

*The New College of Speech and Drama, Ivy House, North End Road, London, N.W.11.

*Northern School of Music, 91, Oxford Road, Manchester, 1. Royal Academy of Dramatic Art, 62-64, Gower Street, London, W.C.1.

*Royal Academy of Music, Marylebone Road, London, N.W.1.

Royal Scottish Academy of Music, College of Dramatic Art, St. George's Place, Glasgow, C.2. (Holders of the Diploma of this college are recognised as 'qualified teachers' after further training in teaching.)

Webber-Douglas School of Singing and Dramatic Art, 34, Clareville Street, London, S.W.7.

Italia Conti Stage School, Avondale Hall, Lander Road, Stockwell, London, S.W.9.

Corona Stage School, 26, Wellesley Road, Chiswick, London, W.4.

EXAMINATIONS TAKEN AFTER PART-TIME STUDY

Diploma of Associateship in Speech of the London College of Music (A.L.C.M.). The examination for this Diploma is both

theoretical and practical. Candidates must be at least 16 years old.

Diploma of Licentiate in Speech and in Public Speaking of the London College of Music (L.L.C.M.). Candidates must hold the Associateship Diploma before entering for this qualification. Candidates in Public Speaking must be at least 18 years old.

Teacher's Diploma in Speech of the London College of Music (L.L.C.M. (T.D.)). Candidates must be at least 18 years old. This is a qualification for private teaching only.

Diploma of Fellowship of the London College of Music. Performer in Speech (F.L.C.M.). Licentiates of the College (L.L.C.M. or L.L.C.M. (T.D.)) may enter for the Fellowship Diploma in the same subject. This is a practical examination with no paperwork.

Diploma of Associate in Speech of Trinity College of Music, London (A.T.C.L.). The minimum age for entry to this examination is 17 years. The examination is theoretical and practical. The Diploma may be awarded as 'Teachers' or 'Performers'.

Licentiate in Speech of Trinity College of Music, London (L.T.C.L.). Candidates must be at least 18 years old. They need not particularly have passed the examinations for A.T.C.L. Candidates may present themselves as Teachers or Performers.

Fellow in Speech of Trinity College of Music, London (F.T.C.L.). Candidates for Fellowship must be at least 21 years old and must first qualify as licentiates. The Fellowship examination consists of a practical section and a thesis.

Diploma of Licentiate of the Guildhall School of Music and Drama (L.G.S.M.).

The examinations for the Performer's and for the Teacher's Diploma of Licentiate in Speech and Drama may be taken by external candidates. They consist of practical and theoretical tests. Candidates for the Teacher's Diploma must be at least 18 years old.

Grade examinations are offered by Guildhall School of Music and Drama in the following subjects:

In speech and drama: Preliminary Examination, Grades 1,

2, 3, 4, 4A, 5, 6, 6A, 7, 8.

In Acting: Grades 5, 6, 6A, 7, 8.

In choral verse speaking: Grades 1, 2, 3, 4, 5, 6, 6A, 7, 8.

In spoken and public speaking.

Candidates may be entered for any grade without having passed in previous grades.

Certificates are awarded as Pass, with Merit and with Honours.

A Junior Special Certificate is awarded to those who pass grades 1, 2, 3, 4 in Speech and Drama.

A Senior Special Certificate is awarded to those who pass grades 4A, 5, 6, 6A, 7 and 8 in Speech and Drama.

GRADE EXAMINATIONS IN SPEECH

These examinations are intended to mark the progress which a pupil—normally studying part-time at private lessons—makes in his subject. The grade certificates are not professional qualifications but can indicate the standard reached by a pupil and may lead on to licentiate and similar examinations or can be followed by a full-time training course.

Grade examinations are offered by:

London College of Music. Examinations in speech are offered at the following grades:

Step I	Preparatory.
Step II	Junior.
Grade I	Primary.
Grade II	Elementary.
Grade III	Transitional.
Grade IV	Intermediate.
Grade V	Advanced Intermediate.
Grade VI	Senior.
Grade VII	Higher Senior.
Grade VIII	Advanced Senior (Part I theoretical, Part II practical).

Certificates are awarded as Pass, First Class Pass and Pass with Honours.

Examinations in Choric Speaking are offered at Grades II, IV, VI and VIII.

Trinity College of Music, London. Examinations in speech are offered at the following grades:

Initial

Grades I to VIII. Written examinations in three grades corresponding to the standards of grade VI, VII and VIII are also conducted.

Examinations in Choral Speech are offered at:

Grade II under 12 years.	Grade VI under 17 years.
Grade IV under 13 years.	Grade VII under 19 years.
Grade V under 15 years.	Grade VIII over 19 years.

Certificates are awarded and **Certificates of Special Merit** will be awarded to candidates in Speech and Choral Speech who

pass all grades; if honours marks have been obtained in all grades (*see below*) the honours Certificate of Special Merit will be awarded.

Examinations in spoken English (for foreigners) are offered at grades I to VIII.

All certificates are awarded as Pass, Pass with Merit and Pass with Honours.

EMBALMING

The British Institute of Embalmers

181, High Street, Erdington, Birmingham, 23

Fellow (F.B.I.E.). Fellows are elected for distinguished service to the profession.

Member (M.B.I.E.). Any employer, employee, Co-operative manager or Co-operative employee is eligible for membership of the Institute provided that he satisfies the National Council of his ability as an embalmer by passing in the theoretical and practical examination of the Council or passing in a comparable examination approved by the Council.

Candidates for the **Preliminary (Educational) Examination** set by the Board of Examiners must be at least 17 years old and hold G.C.E. 'O' level passes or equivalent in four subjects including English Language or the Senior Examination of the College of Preceptors.

The Final Examination is taken by students who are successful in the theoretical examination; it takes the form of 'the complete embalmment of a subject by the candidate'.

GENERAL ENGINEERING

The Council of Engineering Institutions

2, Little Smith Street, Westminster, London, S.W.1

The Council is a federation of the following thirteen chartered engineering institutions:

- The Royal Aeronautical Society
- The Institution of Chemical Engineers
- The Institution of Civil Engineers

The Institution of Electrical Engineers
The Institution of Electronic and Radio Engineers
The Institution of Gas Engineers
The Institute of Marine Engineers
The Institution of Mechanical Engineers
The Institution of Mining Engineers
The Institution of Mining and Metallurgy
The Institution of Municipal Engineers
The Institution of Production Engineers
The Institution of Structural Engineers.

Chartered Engineers (C.Eng.) are persons registered by the Council. Corporate members of the constituent member institutions on 3rd August, 1965, will be entitled to call themselves *Chartered Engineers*. Thereafter, candidates must be corporate members of a constituent institution and, also, pass the Council's examination.

The examination will be in two parts. The first is common to all candidates. The second is a specialist option.

The Institute of British Engineers

Lincoln House, 66, Victoria Street, London, S.W.1

Members (M.Inst.B.E.) must be at least 30 years of age and have held for a sufficient period an important position of independent responsibility in the engineering or allied fields, involving the design or execution of important work, and possess one of the following:

- (i) A Diploma, Certificate or Associateship in Engineering awarded by any College of a University in the U.K., or by a Technical College, provided it is granted on the completion of a full-time course extending over at least three years.
- (ii) A H.N.D. awarded upon the satisfactory completion of a full-time course.
- (iii) A H.N.C. awarded upon satisfactory completion of evening or part-time day courses.

Any candidate who has passed an examination or has obtained an educational qualification equivalent to those above given may, on the production of satisfactory evidence, apply to have it accepted as a qualification for Membership.

Associate Members (A.M.Inst.B.E.) must be either 24 years of age and have held for a sufficient period a position of adequate responsibility in engineering, or possess approved practical experience, or specialised theoretical knowledge in lieu of it, or approved teaching experience.

Acceptable qualifications are:

- (i) A Certificate in Engineering granted by a Technical College, Institute or School in the U.K., upon the satisfactory completion of a full-time course of not less than two years.
- (ii) An Ordinary National Diploma awarded upon the satisfactory completion of evening or part-time day courses.

Any candidate who has passed an examination or has obtained an educational qualification equivalent to those above given may, on the production of satisfactory evidence, apply to have it accepted as a qualification for Associate Membership.

Artisan Graduates must be at least 21 years of age and shall be principally engaged in skilled practical employment in one or other of the branches of engineering or allied work either on their own account, or under the supervision or in the employ of a Member or Associate Member of the Institute, or of an engineer of responsible position.

The Society of Engineers

Abbey House, Victoria Street, London, S.W.1

Honorary Fellows (Hon.F.S.E.) are persons of distinguished position or scientific attainments nominated and elected by the Council. They do not exceed 25 in number.

Fellows (F.S.E.) are not less than 40 years of age and have attained eminence in engineering. They must have occupied responsible positions involving the design or execution of important engineering work.

Members (M.S.E.) must be at least 30 years of age, have been regularly trained as engineers and have passed the examination of the Society prescribed for Graduateship or other examinations approved by the Council and have had at least five years' experience in positions of major responsibility connected with design, research, construction or production of engineering projects or manufactures. Alternatively they must be at least 40 years of age, have been regularly trained as engineers, have had at least 10 years' experience in positions of major responsibility connected with design, research, construction or production of engineering projects or manufactures and in addition have furnished evidence of educational attainments.

Associate Members (A.M.S.E.) must have reached the age of 25 years, have been regularly trained as engineers, have passed the examination of the Society for the Graduateship or such other examinations as the Council may approve and must in addition satisfy the Council as to their experience as engineers. Alternatively

THE INSTITUTION OF BRITISH ENGINEERS



The Institution is administered from its headquarters at Windsor House, 46 Victoria Street, London, S.W.1, where are available files of information and other resources for the use of members. The Reference Library and Reading Room is open from Monday to Friday between 10 a.m. and 5 p.m. Facilities are available through the Institution for members concerned with the protection of their designs to obtain professional advice. A record of productions and services is kept at the Institution's offices, containing classified information and particulars of the expert services being rendered by members, and also of their specialist productions and manufactures. The Institution of British Engineers does not specialise, but is concerned with all branches of engineering and with the furtherance and dissemination of technical knowledge generally.

Members may widen their knowledge, derive benefits from the privileges and services provided by the Institution and assist in promoting the general advancement of the science and practice of engineering in every field.

Requests for copies of the brochure giving particulars of the qualifications, privileges and benefits should be addressed to:

**The Secretary, The Institution of
British Engineers, Windsor House,
46 Victoria Street, London, S.W.1
Phone: WHItEhall 1632/3**

they must have reached the age of 30 years and produce satisfactory evidence as to scientific and practical training as engineers in positions of responsibility. The Council may require the candidate to take an examination prescribed by them.

Associates (A.S.E.) (non-corporate members) are persons who are considered by the Council as qualified for Associateship by reason of their attainments in science or in any of the arts or professions allied to engineering.

Graduates (Grad.S.E.) are persons of 21 years of age and over who are training in engineering and have passed the Graduateship examination or other approved examinations.

Students (Stud.S.E.) are at least 16 years of age, are students of engineering and have satisfied the Council as to their general education and intention to proceed with their training in engineering.

EXAMINATIONS

The Graduateship examination (also for Associate Membership) is set under three separate headings for Civil, Electrical and Mechanical Engineers. **Exemption** is granted to holders of the following British qualifications, as well as many overseas qualifications.

Associate membership of the following institutions:

Institute of Marine Engineers; Institute of Welding; Institution of Chemical Engineers; Institution of Gas Engineers; Institution of Heating and Ventilating Engineers; Institution of Highway Engineers; Institution of Locomotive Engineers; Institution of Naval Architects; Institution of Production Engineers; Institution of Water Engineers; Institution of Civil Engineers (Associate Membership examination Parts I and II); Institution of Electrical Engineers (Associate Membership examination Sections I and II); Institution of Mechanical Engineers (Graduateship (i.e. Parts I and II) of Associate Membership examination); Institution of Mining Engineers (First and Second examinations); Institution of Municipal Engineers (Testamur Examination, County and Highway Examination); Institution of Sanitary Engineers (Associate Membership); Institution of Structural Engineers (Associate Membership); Royal Aeronautical Society (Associate Fellowship examination); Royal Institution of Chartered Surveyors (Intermediate and Final or Direct Membership examinations, including subdivision III of each examination).

Engineering graduates of approved universities may also be granted exemption from the examination.

The Junior Institution of Engineers

33, Ovington Square, Kensington, London, S.W.3

The Institution, which is planning in the future to cater particularly for engineering technicians whilst continuing its policy of catering for the younger engineer, has revised its grades of membership.

Fellows (F.J.Inst.E.) are persons who are corporate members of any of the Chartered Engineering Institutions (*see* page 623) or who have equivalent qualifications.

Members (M.J.Inst.E.) must normally be at least 30 years of age, have at least five years' practical experience, and hold a senior post of responsibility and possess an H.N.C. or an approved equivalent.

Associate Members (A.M.J.Inst.E.) must be at least 21 years of age, have at least three years' practical engineering experience and possess an O.N.C. or approved equivalent.

Corporate Associates (A.J.Inst.E.) and **Associates** are not engineers by qualification but are engaged or are interested in engineering.

Students must be over 17 and under 23 years of age and be undergoing an approved course of training or have passed an O.N.C. or equivalent.

UNIVERSITY DEGREES

In general, engineering degrees are taken in specialised aspects of the subject. However, at the following universities the degree courses are more general in content.

Bristol C.S.T. B.Sc. in Engineering: general course for first 2 academic sessions followed by options in specialised aspects in last 2 sessions. 2 'A' level passes including Physics required.

Durham. B.Sc. in Engineering Science (incorporating Civil, Mechanical and Electrical Engineering): 3 years. 2 or 3 'A' level passes required.

Exeter. B.Sc. in Engineering Science: 3 years. 3 'A' level passes required.

Leicester. B.Sc. in Engineering: 3 years. 2 'A' level passes including Physics required.

Loughborough College of Technology. B.Tech. in General Engineering: 4 years sandwich. 2 or 3 'A' level passes required.

Oxford. B.A. in Engineering Science and Engineering Science and Economics: 3 years. University General Requirement.

Southampton. B.Sc.(Eng.) in Engineering Science: 3 years. 2 'A' level passes required.

St. Andrews. B.Sc. in General Engineering: 4 years. 2 'A' level passes required.

Warwick. B.Sc. in Engineering Science: 3 years. 2 'A' level passes required.

NATIONAL CERTIFICATES AND DIPLOMAS

Ordinary National Certificate in Engineering (O.N.C.) is the first stage towards the Higher National Certificate or Diploma in specialised branches of engineering. The course normally occupies 2 or 3 years. Requirements are G.C.E. 'O' levels in 4 subjects including mathematics, other subjects being science and engineering subjects on completion of the General Engineering course.

General Engineering Courses. The general course provides a diagnostic period to determine whether the student should proceed to a Technician's or National Certificate course. The course, for 15-year-old school-leavers, is 2 years part-time day release or 3 years for evening class attendance.

Regional Examining Unions conduct examinations for O.N.C. and General Engineering Certificates.

CITY AND GUILDS OF LONDON INSTITUTE CERTIFICATES

C.G.L.I. examinations are conducted for the General Course in Engineering (Subject No. 287), also for Engineering Planning, Estimating and Costing (Subject No. 66) (Full Technological Certificate).

AERONAUTICAL ENGINEERING

The Royal Aeronautical Society

4, Hamilton Place, London, W.1

Fellows (F.R.Ae.S.) are elected; they must have the qualifications necessary for Associate Fellowship, have made outstanding contributions in the profession, attained a position of high responsibility and have had long experience of high quality.

Founder Members (**Founder M.R.Ae.S.**) are elected.

Companions are those persons who are ineligible for the technical classes of membership, but have contributed to or are likely to contribute to the development of Aeronautical Science and Engineering and to the furtherance of the objects of the Society.

Associate Fellows (**A.F.R.Ae.S.**) must have passed the Associate Fellowship Examination or its equivalent and have had eight years' experience satisfactory to the Society in the profession; or have had at least 15 years' practical experience satisfactory to the Society and have held a position of technical responsibility, approved by the Society, for seven years.

Candidates for **Associateship** must produce satisfactory evidence of technical knowledge in Aeronautics and have had eight years' approved experience in the profession (e.g. as planning or project engineers in production offices, test pilots or Senior Warrant Officers or Non-Commissioned Officers of the R.A.F. engaged in maintenance and inspection).

Graduates must be not less than 21 and not more than 32 and must be engaged in or receiving training in the profession of Aeronautics; they must have satisfied the Society's educational requirements.

Students must be not less than 18 and not more than 30 and must be engaged in, or about to be engaged in, the profession of Aeronautics and have passed examinations acceptable to the Society. The standard required is that of the School Certificate, the G.C.E. or some corresponding examination.

The Associate Fellowship Examination. The examination is equivalent in standard to that for a degree. It is divided into three parts (I, II and III). **Exemption** may be granted from the various parts of the examination as follows:

Part I: Honours degrees, ordinary degrees, Part I of the examination for the degree and the intermediate degree of many universities are accepted as exempting, on a subject-for-subject basis. In addition, subject-for-subject exemption may be granted to holders of G.C.E. 'A' level, H.N.C., H.N.D., and various other British and Commonwealth technical diplomas and certificates (including some service qualifications). The examinations of the Institutions of Civil Engineers and of Mechanical Engineers are similarly accepted.

Part II: Degrees in aeronautics at the following universities are accepted as exempting: Bristol, Cambridge, Glasgow, London, Southampton, Sydney. This also holds for

diplomas gained at several specified colleges and institutions, and for graduation in certain courses at R.A.F. College, Henlow, Royal Military College, Shrivenham, Royal Naval College, Greenwich, and Royal Naval College, Manadon. Partial exemption is granted to holders of the Senior Commercial Pilot's Licence, and the Flight Navigator's Licence.

Part III: In Part III of the examination, candidates are required to submit either a preliminary design in aeronautics to a specification, or a dissertation, thesis or technical publication on some aeronautical or allied subject. Exemption may be granted to holders of Aircraft Engineer's Licences A, B, C and D.

DEGREES

Degree courses are offered at the following universities with course requirements and durations as shown. For details of higher and other degrees, refer to entries under individual universities in Part 4.

Belfast. B.Sc.: 3 or 4 years. 3 'A' level passes in Pure Mathematics, Applied Mathematics and Physics, or (for the 4-year course) 2 'A' level G.C.E. passes in Pure Mathematics or Applied Mathematics and Physics.

Bristol. B.Sc.: 3 years. 2 'A' level passes, including Mathematics and Physics.

Bristol College of Science and Technology. B.Sc.: 4 years. 2 'A' level G.C.E. passes, including Mathematics and Physics.

Glasgow. B.Sc.: 4 years. 3 Higher grade S.C.E. passes, including Mathematics, or 3 'A' level passes, including Pure and Applied Mathematics.

London (Imperial College). B.Sc.(Eng.), A.C.G.I.: 3 years. 2 'A' level G.C.E. passes, including Physics.

London (Queen Mary College). B.Sc.(Eng.): 3 years. 2 'A' level G.C.E. passes, including Mathematics and Physics.

Loughborough College of Technology. B.Tech.: 4 years. 2 'A' level G.C.E. passes, including Mathematics and Physics.

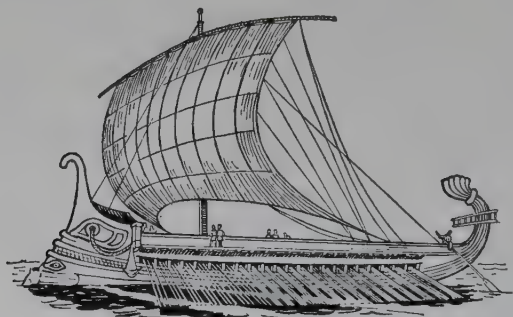
Manchester. B.Sc.: 3 years. 2 'A' level G.C.E. passes, including Mathematics and Physics.

Northampton C.A.T. B.Sc.: 3 years full-time, $4\frac{1}{2}$ years sandwich. 2 'A' level G.C.E. passes, including Physics.

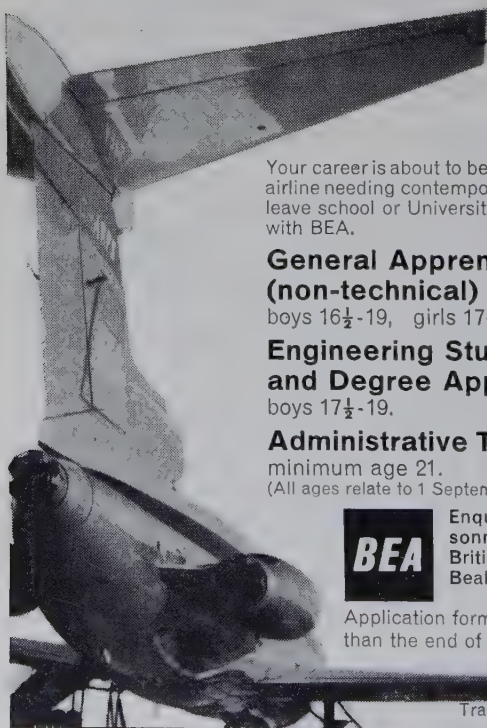
Royal C.A.T. Salford. B.Sc.: 4 years. 2 'A' level G.C.E. passes, including Mathematics and Physics or Chemistry.

Southampton. B.Sc.(Eng.): 3 years. 'A' level G.C.E. passes in Mathematics and Physics.

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Your career is about to begin—link up with BEA: a modern airline needing contemporary attitudes. If you are shortly to leave school or University, there is an opportunity for you with BEA.

General Apprenticeship (non-technical)

boys 16½-19, girls 17½-19.

Engineering Student and Degree Apprenticeships

boys 17½-19.

Administrative Trainee Scheme

minimum age 21.

(All ages relate to 1 September in year of entry.)

BEA

Enquire for further details from Personnel Services Superintendent (BQ), British European Airways, Bealine House, Ruislip, Middlesex.

Application forms have to be submitted not later than the end of February in the year of entry.

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EXTERNAL DEGREES

Courses for the **B.Sc.(Eng.) London** are available at Hatfield College of Technology; Kingston-upon-Hull College of Technology; Kingston-upon-Thames College of Technology.

DIPLOMA IN TECHNOLOGY

Courses for the **Dip.Tech.(Eng.)** in Aeronautical Engineering were offered at Bristol, Loughborough, Northampton and Salford Colleges of Advanced Technology (these courses will now lead to the degrees of the proposed universities) and at Hatfield College of Technology; Kingston-upon-Thames College of Technology; Lanchester College of Technology, Coventry; R.A.F. Technical College, Henlow. These courses will now lead to the **B.Sc. degree of the C.N.A.A.**

NATIONAL DIPLOMAS AND CERTIFICATES

Ordinary National Certificate (O.N.C.) courses are 2 years part-time in duration and entrance is through the General Engineering course or for students with 2 'O' level passes, including Mathematics and an appropriate science subject.

Ordinary National Diploma (O.N.D.) courses are 2 years full-time or 2 or 3 years sandwich, and the entry requirements are similar to those for O.N.C.

Higher National Certificate (H.N.C.) courses are 2 years part-time in duration and candidates must have O.N.C. with appropriate subjects.

Higher National Diploma (H.N.D.) is 2 years full-time or 3 years sandwich and the entry requirement is O.N.C. or O.N.D. in Engineering (credit level) or 'A' level Mathematics and Physics (a pass in either) and 3 other 'O' level passes.

Courses for the Higher National Diploma or Higher National Certificate, or both, are provided at the following institutions:

Belfast College of Technology; Farnborough Technical College; Hatfield College of Technology; Kingston College of Technology; Hull College of Technology; Lanchester College of Technology, Coventry; Royal College of Advanced Technology, Salford.

COLLEGE DIPLOMAS AND ASSOCIATESHIPS

The College of Aeronautics, Cranfield. Diploma of the College of Aeronautics (D.C.Ae.) and Diploma in Advanced Engineering (D.A.E.). The Diplomas of the College, which are postgraduate qualifications, are well known in the field of Aero-

autical Engineering. The entry requirement is that of an honours graduate or an honours Diploma in Technology. Candidates with other qualifications, such as H.N.C. or H.N.D., will also be considered for admission.

The courses last two years, but graduates with first or second class honours in Aeronautical Engineering may be admitted to the second year of the course.

The College of Aeronautical and Automobile Engineering (102, Sydney Street, London, S.W.3) offers a two and a half year course for the **Ordinary Aeronautical Engineering Diploma** and a three and a half year course for the **Higher Aeronautical Engineering Diploma**. The Ordinary Diploma covers the Ministry of Aviation Aircraft Maintenance Engineer's A and C licences: the Higher Diploma also covers this work and Parts I and II of the Associate Fellowship of the Royal Aeronautical Society and Associate Membership of the Institution of Mechanical Engineers.

Hatfield College of Technology. College Diploma in Aeronautical Engineering.

Kingston College of Technology. College Diploma in Aeronautical Engineering.

CERTIFICATES OF THE CITY AND GUILDS OF LONDON INSTITUTE

The C.G.L.I. conducts examinations for the following:

Aeronautical Engineering Practice (Production, Maintenance and Electrical) (Subject No. 171)

Aeronautical Electrical Practice (Subject No. 175).

The following are Aeronautical Craft Subjects:

Aircraft Production: Power Plant (Subject No. 280),
Airplane (Subject No. 281)

Aircraft Maintenance: Power Plant (Subject No. 282),
Airplane (Subject No. 283), Electrical (Subject No. 284),
Instruments (Subject No. 285)

Electronics Craft Practice (Subject No. 286).

AGRICULTURAL ENGINEERING

The Institution of Agricultural Engineers

Penn Place, Rickmansworth, Hertfordshire

Members and Associate Members are corporate members of the Institution.

Members (M.I.Agr.E.) must be at least 40 years of age (or, exceptionally, 35 years of age) and must have held a position of responsibility in agricultural engineering for a specified period. They must have fulfilled the Part I and Part II or Part III examination requirements of the Institution.

Associate Members (A.M.I.Agr.E.) must be at least 27 years of age and have held a position of responsibility in agricultural engineering for a specified period. The educational requirements vary with the age of the candidate.

Candidates under 30 years of age must fulfil Part I, II and III of the Institution's examination requirements.

Candidates between 30 and 35 years of age must fulfil Parts I and II of the examination requirements.

Candidates over 35 years of age must fulfil Part I and Part II or III of the examination requirements.

Graduates (Grad.I.Agr.E.) must be at least 21 years of age, and candidates under 35 years of age must qualify for Parts I and II. Candidates over 35 must qualify for Part I and either Part II or Part III.

Students must have satisfied the Institution that they are undergoing training at a level appropriate to eventual transfer to Graduate Membership.

The Institution also elects **Companions** and **Associates**.

THE INSTITUTION'S EDUCATIONAL REQUIREMENTS

The Institution conducts a Part II examination for candidates who are 30 years of age and over, and will conduct a Part III examination in the future. The other requirements for the three parts are as follows.

Part I consists of studies in Agriculture or Engineering to a level suitable for entry to a course leading to the National Diploma in Agricultural Engineering; examples of suitable qualifications are:

Degree in Agriculture or Horticulture of an approved University; National Diploma in Horticulture or Agriculture; Degree or Diploma or Associateship in Technology or Engineering of an approved University or College; H.N.C., O.N.C., O.N.D., H.N.D. in Engineering; City and Guilds 260 and 261 (Agricultural Engineering Technician's) (Part II) Certificate.

Part II normally consists of training in Agricultural Engineering leading to a degree or degree-level qualification or to the National Diploma in Agricultural Engineering. Examples of suitable qualifications are:

National Diploma in Agricultural Engineering; Associateship of the National College of Agricultural Engineering; B.Sc.(Agr.Eng.) (Dublin); M.Agr.Sc.(Farm Mechanisation) or (Agricultural Building); M.Sc.(Agr.Eng.); National Diploma in Agricultural Engineering.

Part III consists of either the submission of a thesis or an examination or a professional interview or a combination of these alternatives. Exemption from Part III may be granted on the basis of published work.

UNIVERSITY DEGREES

Newcastle. M.Sc. in Agricultural Engineering: 2 years for graduates in Agriculture or Engineering. **B.Sc. in Agricultural Engineering:** 3 years. 3 'A' level passes are required, including Pure and Applied Mathematics and Physics.

Reading. M.Agr.Sc. in Agricultural Science (Farm Mechanisation): 2 years for agriculture graduates.

NATIONAL DIPLOMA

National Diploma in Agricultural Engineering (N.D.Agr.E.) is a one-year full-time course open to persons with the National Diploma in Agriculture, degrees, H.N.C., H.N.D. in engineering or C.G.L.I. Certificate in Agricultural Engineering Technician's work.

Courses leading to the N.D.Agr.E. are held at Essex Institute of Agriculture, the College of Aeronautical and Automobile Engineering (London, S.W.3) and West of Scotland Agricultural College.

COLLEGE ASSOCIATESHIPS AND DIPLOMAS

National College of Agricultural Engineering (Silsoe, Bedford). **Associateship (A.N.C.A.E.):** 3-year course of degree level. Course requirements are G.C.E. 'A' level passes in Mathematics and Physics or O.N.C., O.N.D. in Engineering at an approved standard.

Special Certificate: 1-year course for graduates (or H.N.D.'s) in Agriculture or Engineering.

CITY AND GUILDS OF LONDON INSTITUTE EXAMINATIONS

The C.G.L.I. conducts the following examinations:

Agricultural Mechanic's Certificate (Subject No. 260)

Agricultural Technician's Certificate (Subject No. 261)

- General Agriculture (stage I) Farm Machinery (Introductory) (Subject No. 267)
- General Agriculture (stage II) Farm Machinery Operation and Care (Subject No. 270)
- General Agriculture (stage II) Farm Maintenance and Repair (Subject No. 272)
- Horticulture (stage II) Machinery (Subject No. 274).

AUTOMOBILE ENGINEERING

The Institute of the Motor Industry (Incorporated)

Fanshaws, Brickendon, Hertfordshire

A Fellow (F.I.M.I.) must be at least 40 years of age, have been an Ordinary Member for at least 10 years, and have held a senior executive position for at least five years prior to his application. Applicants might be required to submit a paper on a subject from an approved list.

Members (M.I.M.I.) must be at least 30 years of age, have been Associate Members for at least five years, and have been engaged in a responsible capacity in the motor industry for at least five years.

Associate Members (A.M.I.M.I.) must be at least 24 years of age and have had at least three years' continuous employment in a responsible position in the motor industry. In addition they must have passed the Associate Membership examination or gained exemption from it. Alternatively they must be at least 45 years of age with not less than 10 years in a responsible position in the motor industry provided the Council is satisfied as to the training, experience and degree of responsibility of the candidate. The candidate may be required to submit a paper on an approved subject.

Graduates (Grad.I.M.I.) must be at least 20 years of age, had at least two years' continuous employment in the motor industry, and passed prescribed portions of the Associate Membership examination or a satisfactory equivalent.

Associates (Assoc.I.M.I.) are persons not qualified for corporate membership but who fulfil the following conditions. They must be at least 30 years of age and had at least five years' continuous employment ancillary to the motor industry and satisfy the Council that their admittance will further the development and wellbeing of the motor industry.

Students must be at least 16 years of age, employed in the motor industry and be studying for the Associate Membership examination.

EXAMINATIONS

The Associate Membership Examination consists of three sections.

Section A consists of Part I (English, Mathematics, Elementary General Science), Part II (Motor Vehicle Technology, Engineering Drawing or Elementary Commercial Practice).

Exemptions are granted on a subject-for-subject basis to holders of G.C.E. 'O' level or equivalent passes, Engineering Institutions Part I examination, General Engineering Courses together with Examinations of approved Motor Vehicle Technology courses (e.g. C.G.L.I. Motor Vehicle Mechanic's Certificate) or equivalent or O.N.C., O.N.D. in Engineering including assessed subject in Automobile Engineering.

Section B. One group of subjects has to be chosen from: Mechanical; Electrical; Commercial; Parts Merchandising; Vehicle Sales; Motor Body Construction and Repair.

Exemptions are granted for the Mechanical group to holders of C.G.L.I. Motor Vehicle Technician's Certificate (170).

For the Electrical group to holders of C.G.L.I. Motor Vehicle Electrician's Certificate (169).

For the Commercial group to holders of O.N.C., O.N.D. in Business Studies or to C.I.S., C.C.S., C.C.A., and a subject-for-subject basis stage III of the Regional Unions Commercial certificate.

There are no exemptions granted for the other groups.

Section C. The examinations are Motor Trade Machine and Management, and one of: Workshop Administration and Organisation; Sales Administration and Organisation; Parts Department Administration and Organisation; Business Administration and Organisation.

No exemption is granted from Part C.

Courses are offered at the following colleges in preparation for the Associate Membership examination.

Gateshead Technical College (3 years sandwich); Loughborough College of Further Education (3 years full-time); Bromsgrove College of Further Education (3 years sandwich); Willesden Technical College (sandwich).

Numerous other colleges offer part-time and evening courses.

The Institution of Mechanical Engineers
(Automobile Division)

1, Birdcage Walk, Westminster, London, S.W.1

The Institution of Automobile Engineers was, in 1947, amalgamated with the Institution of Mechanical Engineers, and an Automobile section inaugurated. Corporate members of the I.Mech.E. who are accepted as to be registered with the division are entitled to describe themselves as 'Chartered Automobile Engineers'.

UNIVERSITY DEGREE

Loughborough College of Technology. B.Tech. in Automotive Engineering and Automobile Engineering: each 4 years sandwich. 'A' level passes required in Pure and/or Applied Mathematics and Physics.

COLLEGE DIPLOMAS AND ASSOCIATESHIPS

The following courses are offered:

Bolton Technical College. College Diploma in Automobile Engineering: 2 years full-time.

The Advanced School of Automobile Engineering, Cranfield. Diploma in Automobile Engineering (D.Au.E.): 1-year course for candidates with 1st or 2nd class honours degrees or Dip.Tech.'s in Physics or Mechanical Engineering. A preliminary course of 1 year duration is offered to holders of pass degrees or diplomas, H.N.C. or H.N.D.

The National Craftsman's Certificate for a Motor Vehicle Service Mechanic is awarded by the Department of Education and Science, the Ministry of Education for Northern Ireland and the Scottish Education Department in conjunction with the National Joint Industrial Council for the Motor Vehicle Retail and Repairing Trade (201, Great Portland Street, London, W.1), to those engaged in motor vehicle repair and maintenance who complete satisfactorily an approved course at a college of further education or similar establishment and pass the required examinations.

Candidates are required to complete satisfactorily an approved part-time three-year course of instruction, to pass the C.G.L.I. examinations in Motor Vehicle Mechanic's Work (Course No. 168) and to pass an examination in practical work. The minimum age of admission to the course is 16. Courses are normally based on the

syllabuses of the C.G.L.I. or on the corresponding syllabuses of the regional examining unions. The examinations held at the end of the first and second years of the course may be college, regional examining union or, in Northern Ireland, Ministry of Education examinations.

Candidates for the Certificate are normally apprentices indentured under the apprenticeship scheme of the National Joint Council. The period of apprenticeship is five years.

CITY AND GUILDS OF LONDON INSTITUTE CERTIFICATES

The C.G.L.I. conducts examinations for the following certificates:

- Motor Vehicle Mechanic's Work (Subject No. 168)
- Motor Vehicle Electrician's Work (Subject No. 169)
- Motor Vehicle Technician's Work (Subject No. 170)
- Vehicle Body Building (Subject No. 294)
- Vehicle Panel Beating (Subject No. 295)
- Vehicle Painting and Industrial Finishing (Subject No. 296)
- Vehicle Body Trimming (Subject No. 297)
- Vehicle Body Work (Subject No. 298)
- Vehicle Body Engineering Technician's Certificate (Subject No. 318).

CERTIFICATES OF THE REGIONAL EXAMINING BODIES

(i) UNION OF LANCASHIRE AND CHESHIRE INSTITUTES

The Union awards the following certificates:

- Motor Vehicle Mechanic's; Motor Vehicle Technician's;
- Vehicle Body Building; Vehicle Body Panel Beating;
- Vehicle Painting and Industrial Finishing; Vehicle Body Work; Vehicle Body Engineering Technician.

(ii) EAST MIDLAND EDUCATIONAL UNION

The Union conducts the following examinations:

- Course for Motor Vehicle Mechanics; Motor Engineering (Electrical).

(iii) WELSH JOINT EDUCATION COMMITTEE

The Committee conducts a course in Motor Vehicle Mechanics.

(iv) UNION OF EDUCATIONAL INSTITUTIONS

The Union conducts a course in Motor Vehicle Mechanic's Work.

(v) NORTHERN COUNTIES TECHNICAL EXAMINATIONS COUNCIL

The Committee conducts courses in Motor Vehicle Mechanics and Motor Body Repair Work.

CHEMICAL ENGINEERING

The Institution of Chemical Engineers

(incorporated 1957)

16, Belgrave Square, London, S.W.1

Members (M.I.Chem.E.) must be either at least 33 and already Associate Members, engaged for a sufficient period in an important post of responsibility in Chemical Engineering; or be at least 36, possess the qualifications for Associate Membership and have been engaged for a sufficient period in an important post of responsibility in Chemical Engineering; or have attained a post of such eminence in the profession as to qualify them, in the opinion of the Institution's Council, for distinction by election to corporate membership in the class of Member.

Associate Members (A.M.I.Chem.E.) must be at least 25, have passed Parts 1, 2 and 3 of the Examination or have obtained an exempting qualification. Candidates not less than 33, with appropriate training and experience, may be permitted to submit a thesis.

Graduates must be at least 20 and must either have passed Parts 1 and 2 of the Examination or have obtained an exempting qualification.

Students must be not less than 16 and must satisfy the Institution that they are in course of preparation and training for the practice of Chemical Engineering, with the object of taking the remainder of the Professional Examination, having passed Part 1, or of obtaining another qualification which will exempt them from the examination requirements for Graduateship or Associateship, or of taking the remainder of the Examination, having obtained a qualification equivalent to at least two papers in Part 1.

The Institution may elect **Honorary Members.**

PROFESSIONAL EXAMINATION

The Institution conducts examinations for candidates seeking to become Students, Graduates, Associate Members and Members in

cases in which an examination is or may be required. Generally, the requirements for the grades of membership are:

Student:	Part 1.
Graduate:	Parts 1 and 2.
Associate Member:	Parts 1, 2 and 3 and, in some cases, Part 4 (Oral Examination).
Member:	No further requirements beyond those for Associate Membership.

Exemption from examination requirements for Associate Membership is granted to holders of approved Honours degrees in Chemical Engineering of British and many Commonwealth universities, holders of Dip.Tech. in chemical engineering (1st class or 2nd class (Div. I) honours), postgraduate university diplomas in chemical engineering, college diplomas or associateships in chemical engineering of Birkenhead Technical College (Class 1 or 2 (I)); Birmingham C.A.T. (Class 1 or 2 (I)); Heriot-Watt College; Glamorgan C.T.C. (Class 1 or 2 (I)); Loughborough C.T. (Class 1 or 2 (I)); Salford (Class 1); West Ham C.T.

Partial exemption is granted to holders of approved pass or ordinary degrees in chemical engineering and the qualifications listed above, with lower honours.

Partial exemption is also granted in respect of the following qualifications:

H.N.C. in Chemical Engineering with approved endorsements; H.N.C. in Civil, Mechanical or Electrical Engineering; H.N.C. in Chemistry; Graduateship or Associate Membership of the Institutions of Civil, Mechanical, Electrical or Gas Engineers; Graduateship, Licentiateship or Associate Membership of the Royal Institute of Chemistry; The first degree of British or Commonwealth universities in which Chemistry is a principal subject or in Civil, Mechanical or Electrical Engineering.

COURSES

One-year full-time courses for the Graduateship of the Institution are offered at Birkenhead Technical College, Neath Technical College, Glamorgan, and West Ham College of Technology; a 4-year sandwich course is also offered at Birkenhead.

UNIVERSITY DEGREES AND DIPLOMAS

(i) DEGREES

Honours degree courses are offered at the following universities with course requirements and durations shown. For details of

higher and other degrees refer to entries under individual universities in Part 4.

Birmingham. B.Sc.: 3 years. 3 'A' level passes required including Physics and Chemistry.

Cambridge. B.A.: Chemical Engineering Tripos taken after honours obtained in certain other subjects.

Edinburgh. B.Sc.: 4 years. Physics, Chemistry, Pure and Applied Mathematics 'A' level passes required.

Exeter. B.Sc.: 3 years. 3 'A' level passes required including Physics and Chemistry.

Leeds. B.Sc.: 3 or 4 years. At least 3 'A' level passes including Physics and Chemistry required.

London (Imperial and University Colleges and West Ham C.T.). B.Sc.(Eng.): 3 'A' level passes including Physics and Chemistry required.

Manchester. B.Sc.: 3 years. 3 'A' level passes including Physics and Chemistry required.

Newcastle. B.Sc.: 3 or 4 years. 3 'A' level passes including Physics and Chemistry, 2 'A' level passes for 4-year course.

Nottingham. B.Sc.: 3 or 4 years. 3 'A' level passes including Physics and Chemistry, 2 'A' level passes for 4-year course.

Sheffield. B.Sc.Tech.: 3 years. 'A' level passes in Physics, Chemistry, Pure and Applied Mathematics.

Strathclyde. B.Sc.: 4 years. 2 'A' level passes including Pure and Applied Mathematics required.

Wales (Swansea). B.Sc.: 3 years. 3 'A' level passes including Physics and Chemistry.

(ii) EXTERNAL DEGREE

Courses for the **B.Sc.(Eng.) London** are held at the Borough Polytechnic.

(iii) FORMER DIP.TECH. COURSES, DEGREES OF THE NEW UNIVERSITIES AND THE C.N.A.A.

The following colleges now offer courses leading to degrees of the new universities. The 3-year courses are full-time, the 4-year and other courses are generally sandwich. Good O.N.C. or O.N.D. passes will be accepted in lieu of course requirements stated in terms of 'A' level passes.

Battersea C.T. B.Sc.: 3 or 4 years. 3 'A' level passes required including Physics and Chemistry.

Birmingham C.A.T. B.Sc.: 4 years. 2 'A' level passes required.

Bradford I.T. B.Tech.: 4 years. 2 'A' level passes including Chemistry required.

Loughborough C.T. B.Tech.: 4 years. 2 'A' levels including Chemistry required.

Royal C.A.T. Salford. B.Sc.: 4 years. 2 'A' levels including Chemistry required.

Heriot-Watt College. B.Sc.: 4 years. 2 'A' levels including Pure and Applied Mathematics.

For degrees of the C.N.A.A. in Industrial Chemistry and Chemical Technology *see* Chemistry, pages 532-533.

(iv) UNIVERSITY DIPLOMAS AND CERTIFICATES

Bradford I.T.: Postgraduate Diploma in Chemical Engineering. 1-year course.

University of Cambridge: Postgraduate Certificate in Chemical Engineering. 1-year course.

University of Leeds: Postgraduate Diploma in Chemical Engineering. 1-year course.

University of London (Imperial College): (D.I.C.) Diploma in Chemical Engineering and Chemical Technology. 1-year course.

University of London (King's College): 1-year postgraduate diploma in Chemical Engineering.

University of London (University College): College postgraduate diploma in Chemical Engineering. 1-year course.

University of Wales (Swansea): College postgraduate diploma in Chemical Engineering. 1-year course.

NATIONAL DIPLOMA AND CERTIFICATE

Courses for the **Higher National Diploma (H.N.D.)** are offered at the colleges listed below. They usually last three years; entry qualifications are O.N.C. or O.N.D. or the equivalent.

Huddersfield College of Technology (2 years full-time);
Constantine College of Technology, Middlesbrough (3 years sandwich); Southampton College of Technology (3 years sandwich).

Courses for the **Higher National Certificate (H.N.C.)** are held at various colleges. They are 2 years in duration and the entry qualifications are Ordinary National Certificate in Engineering or Chemistry or 'A' level passes in Chemistry, Physics and Mathematics.

COLLEGE DIPLOMAS AND ASSOCIATESHIPS

Constantine College of Technology. College Higher Diploma: 3 years sandwich.

West Ham College of Technology. College Diploma: 4 years sandwich or 5 years sandwich.

Glamorgan College of Technology. College Diploma: 4 years sandwich.

CITY AND GUILDS OF LONDON INSTITUTE AND REGIONAL EXAMINING UNIONS EXAMINATIONS

Examinations are held by the C.G.L.I. and the various Examining Unions in Chemical Plant Operation (C.G.L.I. Subject No. 24). In addition, the Northern Counties Technical Examinations Council holds examinations for the Chemical Industries Course.

CIVIL ENGINEERING

The Institution of Civil Engineers

Great George Street, London, S.W.1

(i) CORPORATE MEMBERSHIP

Members (M.I.C.E.) must be at least 33 years of age and be in positions of responsibility in the design or execution of important engineering work. In addition candidates must fulfil one of the following:

- (i) Be an Associate Member or fulfil conditions for Associate Membership and hold a position of responsibility in important engineering work.
- (ii) Have suitable civil engineering training and education and have been employed for at least 15 years in a position of full responsibility in important engineering work, acquired an exceptional degree of eminence in the profession, and be not less than 50 years of age.
- (iii) Have high educational qualifications and either made noteworthy contribution to engineering or occupy a prominent position in the profession.

Associate Members (A.M.I.C.E.) must be at least 25 years of age, be employed as civil engineers, and have passed or be exempted from the Institution's examination. In addition they must have certain combinations of experience and training as laid down by the Council.

(ii) NON-CORPORATE MEMBERSHIP

Associates are not civil engineers by profession but are qualified to concur with civil engineers in the advancement of engineering knowledge.

Honorary Members are persons of eminence in various spheres who are not civil engineers by profession.

Graduates must have passed or been exempted from the Institution's examination, and be not more than 38 years of age.

Students must be at least 17 years of age and be studying to enter the profession.

(iii) THE INSTITUTION'S EXAMINATION

There are two parts—Part I and Part II—to the examination.

Complete exemption is gained by holders of recognised British degrees in Engineering, and Dip.Tech.'s in Civil Engineering, as well as many Commonwealth and overseas degrees in Engineering. Diplomas and Associateships in Civil or Structural Engineering of the following colleges also afford exemption:

Robert Gordon's T.C.; Birmingham C.A.T.; Bolton T.C.; Brighton C.T.; Dundee T.C.; Heriot-Watt C.T.; Enfield C.T.; Glasgow Royal College of Science and Technology; Hatfield C.T.; Leeds C.T.; Battersea C.T.; Brixton School of Building; The Polytechnic, Regent Street; Loughborough College; Manchester C.T.; Constantine C.T.; Paisley C.T.; Plymouth C.T.; Portsmouth C.T.; Reading T.C.; South-West Essex T.C.; Sunderland T.C.; Twickenham T.C.

Certain other postgraduate courses of study also afford complete exemption. O.N.D. affords exemption from Part I on a subject-for-subject basis. H.N.C. holders with credits in O.N.C. subjects will be granted exemption from Part I, on a subject-for-subject basis. Candidates who have passed the whole of the Institutions of Mechanical Engineers or Electrical Engineers examinations are granted complete exemption.

(iv) COURSES

Courses leading to the Institution's examination are conducted at Bolton Technical College, South-West Essex Technical College, Kingston C.T., Surrey, Liverpool College of Building, Rutherford C.T., Newcastle, and Wigan and District Mining and Technical College.

UNIVERSITY DEGREES AND DIPLOMAS

(i) FIRST DEGREES

Honours degree courses are offered at the following universities, with the course durations and requirements as shown. For details of higher and other degrees refer to entries under individual universities in Part 4.

Aberdeen. B.Sc.(Eng.): 4 years. 2 'A' levels.

Belfast. B.Sc.: 4 years, 2 'A' levels. 3 years, 3 'A' levels.

Birmingham. B.Sc.: 3 years. 3 'A' levels.

Bristol. B.Sc.: 3 years. 2 'A' levels, including Pure and Applied Mathematics.

Durham. B.Sc. in Engineering Science: 3 years. 2 or 3 'A' levels.

Edinburgh. B.Sc.: 4 years. 3 'A' levels.

Glasgow. B.Sc.: 4 years. 3 'A' levels, Physics preferred.

Leeds. B.Sc.: 3 or 4 years. 2 or 3 'A' levels.

Leicester. B.Sc. in Engineering: 3 years. 2 'A' levels.

Liverpool. B.Eng.: 3 years. 3 'A' levels.

London. B.Sc.(Eng.) (at Imperial, Queen Mary College, King's, University College, West Ham C.T., Woolwich Polytechnic): 3 years. 2 'A' levels.

Manchester. B.Sc.: 3 years. 2 or 3 'A' levels.

Manchester. B.Tech.: 3 years. 3 'A' levels.

Newcastle. B.Sc.: 3 or 4 years. 2 'A' levels.

Nottingham. B.Sc.: 3 or 4 years. 2 'A' levels.

Oxford. B.A.: 3 years.

St. Andrews. B.Sc.: 4 years. 2 'A' levels.

Sheffield. B.Eng.: 3 years. 3 'A' levels.

Southampton. B.Sc.(Eng.): 3 years. 2 'A' levels.

Wales (Cardiff). B.Sc.: 3 years, 3 'A' levels including Physics and Chemistry, or H.N.D., H.N.C. 4 years, 2 'A' levels or O.N.C., O.N.D.

Wales (Swansea). B.Sc.: 3 years, 3 'A' levels or H.N.C. 4 years, 2 'A' levels or O.N.C.

(ii) FORMER DIP.TECH. COURSES, DEGREES OF THE NEW UNIVERSITIES AND THE C.N.A.A.

The following institutions offer courses leading to honours degrees of the new universities (the 4-year courses are normally sandwich courses). Good O.N.C. or O.N.D. qualifications will generally be accepted in lieu of stated 'A' level passes.

Birmingham C.A.T. B.Sc.: 3 or 4 years. 2 'A' levels.

Bradford I.T. B.Sc.: 3 or 4 years. 2 'A' levels.

Battersea C.T. B.Sc.: 3 or 4 years. 3 'A' levels preferred.

Loughborough C.T. B.Sc. or B.Tech.: 3 or 4 years. 3 'A' levels.

Northampton C.A.T. B.Sc.: 3 or 4½ years. 3 'A' levels.

Salford Royal C.A.T. B.Sc.: 4 years. 2 'A' levels.

Welsh C.A.T. B.Eng.(Tech.): 4 years. 2 'A' levels.

Heriot-Watt College. B.Sc.: 4 years. 2 'A' levels.

Strathclyde. B.Sc.: 4 years. 2 'A' levels.

Courses at the following institutions now lead to **honours degrees of the C.N.A.A.** (4-year sandwich courses).

Brighton C.T.; Glamorgan C.T.; The Polytechnic, Regent Street; Sunderland Technical College; Woolwich Polytechnic; Dundee T.C.; Lanchester C.T., Coventry; Nottingham Regional C.T.

In addition, honours degree courses in Civil Engineering are offered at:

Bolton Institute of Technology; South-West Essex T.C.; Medway C.T.; Constantine C.T., Middlesbrough; Nottingham and District T.C.; Plymouth C.T.; Portsmouth C.T.; Sunderland T.C. (B.Sc. Newcastle); Kingston C.T., Surrey; Paisley C.T.; Robert Gordon's T.C. (B.Sc. Aberdeen).

Unless otherwise stated, the degrees awarded are of London University.

(iii) DIPLOMA

University of Birmingham: Postgraduate Diploma in Civil Engineering. 1-year full-time course.

COLLEGE DIPLOMAS

College Diplomas in Civil Engineering are awarded at:

Brighton College of Technology (3 years full-time); Kingston College of Technology (3 years full-time); West Ham College of Technology (3 years full-time); Glamorgan College of Technology (4 years sandwich, College Associateship); Lanchester College of Technology (4 years sandwich); Mid-Essex Technical College (4 years sandwich); South-West Essex Technical College (4 years sandwich); Hatfield College of Technology (3 years full-time); Medway College of Technology (3 years full-time); Leeds College of Technology (3 years full-time); Brixton School of Building (5 years sandwich); The Polytechnic, Regent Street (3 years full-time); Constantine College of

Technology (4 years sandwich); Enfield College of Technology (4 years sandwich); Willesden Technical College (4 years sandwich); Nottingham and District Technical College (4 years sandwich); Oxford College of Technology (4 years sandwich); Plymouth College of Technology (3 years full-time); Portsmouth College of Technology (3 years full-time); Reading Technical College (4 years sandwich); Sheffield College of Technology (4 years sandwich); Robert Gordon's Technical College (Associateship, Diploma); Paisley College of Technology (Diploma).

NATIONAL CERTIFICATES

National Certificate courses in Civil Engineering are offered at a large number of technical colleges over the country.

The Ordinary National Certificate (O.N.C.) lasts 2 years and entrance is open to candidates with either 4 'O' level passes or who have passed the General Course in Engineering. This is followed by the 2-year course for the **Higher National Certificate (H.N.C.)**.

CITY AND GUILDS OF LONDON INSTITUTE EXAMINATIONS

C.G.L.I. examinations are held in the following subjects:

Concrete Technology (Supervisory Level) (Subject No. 110)

Higher Certificate in Civil Engineering (Subject No. 308, overseas only)

Ordinary Diploma in Building and Civil Engineering (Subject No. 328, overseas only).

ENGINEERING DESIGN

The Institution of Engineering Designers

38, Portland Place, London, W.1

(i) CORPORATE MEMBERSHIP

Fellows (F.I.E.D.) are persons who have given satisfactory proof of excelling ability and outstanding merit in the profession and are eligible by their attainment and/or their contribution to the advancement of Engineering Drawing and Design.

Members (M.I.E.D.) must have engineering drawing office

experience of at least 12 years of which six were devoted to Engineering Design and have passed or been exempted from the Final examination of the Institution (by work and thesis if possible).

Associate Members (A.M.I.E.D.) must have at least seven years' drawing office experience of which at least two years were devoted to Engineering Design and have passed or been exempted from the Institution's examination, if possible by work and thesis.

(ii) NON-CORPORATE MEMBERSHIP

Graduates (Grad.I.E.D.) must have at least two years' engineering drawing office experience and passed, or been exempted from, the Intermediate examination of the Institution.

Students (Stud.I.E.D.) must be actively or prospectively engaged in engineering or as apprentices or trainees and have passed or been exempted from the Preliminary examinations.

Companions (Comp.I.E.D.) are persons or firms who are interested in the profession of Engineering Drawing and Design and who desire to support the promotion of the aims of the I.E.D.

Honorary Members (Hon.M.I.E.D.) are elected in acknowledgment of special services to the Institution and the profession in general. It is the highest honour the Institution can bestow.

(iii) ADMISSION

Admission to the various grades depends on a combination of educational qualifications, experience and grade of experience.

The examination is set in Sections A, B and C. For Grad.I.E.D. the candidate must pass sections A and B; for Associate Membership and Membership sections A, B and C, members submitting a thesis and a selection of their own professional work. Section A is exempted by a pass in the Common Preliminary examination or its equivalent (G.C.E.), Section B by O.N.C. or equivalent, and Section C by H.N.C. with endorsements.

ELECTRICAL ENGINEERING

The Institution of Electrical Engineers

Savoy Place, London, W.C.2

(i) CORPORATE MEMBERSHIP

Honorary Members are elected.

Members (M.I.E.E.) must be at least 33 years of age and have

been Associate Members for at least three years, or possess qualifications required for election to Associate Membership. Also the candidate must have experience involving appropriate superior responsibility for at least five years, and such knowledge of Electrical Science and eminence in his profession that his admission as a member would conduce to the interest of the Institution. He must also be engaged in the practice of Electrical Science or Engineering.

Associate Members (A.M.I.E.E.) must be at least 26 years of age and have attained a standard of general education and received further education and training as an Electrical Engineer in order to satisfy the Institution's examination regulations and training regulations and, in addition, had not less than two years' experience in a responsible position as an electrical engineer. The aggregate of engineering education, training and responsible experience must not be less than seven years. Alternatively, the candidate must be 28 years of age and satisfy the examination and training regulations and have had at least three years' responsible experience as an electrical engineer.

(ii) NON-CORPORATE MEMBERSHIP

Graduates (Graduate I.E.E.) must be at least 21 years of age but not more than 35 years of age, and satisfy the Examination Regulations. They must also satisfy the Council that they intend in due course to proceed to corporate membership.

Students (Student I.E.E.) must be at least 17 but not more than 28 years of age. They must be undergoing an approved course of further education and have passed an approved preliminary examination. Students must intend to satisfy the requirements of admission as graduates.

Companion (Companion I.E.E.) are not electrical engineers by profession, but satisfy the Council that they have rendered important services to Electrical engineering in the fields of Commerce, Finance, Law, or Science.

Associates (Associate I.E.E.) must be at least 30 years of age and of good education and have had at least five years' responsible experience as electrical engineers or should be engaged in or associated with any branch of Engineering.

(iii) EXAMINATION

The Institution's Examination consists of three parts. Part I is conducted jointly with various other engineering Institutes and is known as the Engineering Institutions' Examination Part I. In

Part I there are five compulsory papers. Before appearing in Part I the candidate must possess an accepted qualification in English language. Among the accepted qualifications are G.C.E. 'O' level, School Certificate, Matriculation, S.C.E. in higher grades in English or English Language.

In Part II there are four compulsory papers.

In Part III there are three papers set, with Advanced Electrical Engineering obligatory. The two other papers taken may be chosen from a list of nine possible subjects (including Electronics, Illumination, Radio and other topics).

Exemptions from the different parts of the examination are afforded by various qualifications, complete details of which may be obtained from the Institution.

Complete exemption is provided by: Approved degrees and Dip.Tech.'s in Electrical Engineering; Approved Honours degrees in Physics. Other degrees are accepted as exempting depending upon the candidate's training and experience.

Approved pass degrees in Physics will provide exemption when candidates have passed either Advanced Electrical Engineering or Physical Electronics in Part II examinations. Degrees in Mathematics or General Degrees in Mathematics and Physics will provide exemption for candidates passing Electrical Engineering papers in Parts I and II. Degrees in Mechanical and Civil Engineering must be supplemented by passes in specific papers in Parts II and III. However, candidates with approved amounts of training and experience with approved degrees in physics, mathematics, mechanical or civil engineering will be granted complete exemption.

College Associateships and Diplomas will provide varying (up to complete) exemption, and H.N.D. in Electrical Engineering, exemption from Parts I and II. H.N.C. in Electrical Engineering exempts from Parts I and II, provided credits are obtained in specified subjects.

Association of Supervising Electrical Engineers

26, Bloomsbury Square, London, W.C.1

Members are engineers or senior technicians at least 26 years of age with not less than 10 years' experience in engineering work. They must have an acceptable level of electrical or mechanical engineering training and preferably an adequate qualification. Employment must entail a high degree of personal responsibility for technical details of electrical installation work, or maintenance of electrical plant or equipment, or electrical work on the planning of

electrical schemes, design or sale of electrical equipment or direction of suitable electrical service. Provision is made for admission of candidates whose duties are mainly concerned with Mechanical Engineering.

Associate Members are engineers or technicians at least 23 years of age. They must have Electrical or Mechanical Engineering experience of an acceptable standard and preferably an adequate qualification. The duties required are similar to those of a Member but without the high degree of responsibility, education or training.

Graduates should not be more than 28 years, possess O.N.C. in Electrical Engineering or the equivalent, and be engaged in electrical or allied duties.

Students must be at least 18 but not more than 25 years in age. They should be serving a recognised apprenticeship and be engaged as a student in electrical or allied industries and be following a recognised course of technical study leading to O.N.C. or equivalent in Electrical Engineering.

Institution of Electrical and Electronics Technicians and Engineers Ltd.

26, Bloomsbury Square, London, W.C.1

(i) CORPORATE MEMBERSHIP

Members (M.I.T.E.) are at least 30 years of age and must have been an Associate Member for at least three years. They must have had superior responsibility for at least five years in the application and installation of electricity.

Associate Members (A.M.I.T.E.) must be at least 25 years of age, have fulfilled the conditions for Graduateship, and had at least two years' experience as an electrical or electronics technician engineer.

(ii) NON-CORPORATE MEMBERSHIP

Graduates must be at least 21 but not more than 30 years of age. They must possess H.N.C. in Electrical and Electronic Engineering or equivalent qualification. The other acceptable qualifications include H.N.D.'s, A.S.E.E. Diplomas, certain C.G.L.I. certificates, and certain college diplomas and associateships.

Students are between 18 and 25 years of age and undergoing regular and approved courses of training leading to admission as Graduates.

BBC ENGINEERING DIVISION

A number of vacancies occur each year for technical staff, and the qualifications for each type of post are as follows:

TECHNICAL OPERATORS IN TELEVISION (MEN) AND SOUND (MEN AND WOMEN)

G.C.E. 'O' Level, including English Language, Mathematics, and Physics.

G.C.E. 'A' Level—a pass in any one subject.

TECHNICAL ASSISTANTS (MEN)

G.C.E. 'O' Level, including English Language, Mathematics, and Physics.

G.C.E. 'A' Level, including Physics or Mathematics.

TECHNICAL TRAINEES (MEN)—A three year Sandwich Course leading to the Higher National Diploma in Electrical Engineering.

G.C.E. 'O' Level, including English Language, Mathematics, and Physics.

G.C.E. 'A' Level, including Physics and Mathematics.

ENGINEERS (MEN)—One of the following:

United Kingdom University Degree in Electrical Engineering or Physics.

Higher National Diploma or Certificate in Electrical Engineering (light current).

City & Guilds full Technological Telecommunication Technicians' Certificate.

Graduateship Examination of the Institution of Electrical Engineers (Parts I and II).

Graduateship Examination of the Institution of Electronic and Radio Engineers (May 1951 or subsequently).

Further details about any of these posts may be obtained from:

**Engineering Recruitment Officer,
Broadcasting House,
London, W.1.**

UNIVERSITY DEGREES AND DIPLOMAS

(i) DEGREES

Honours degree courses in Electrical Engineering are offered at the universities listed below. For details of higher and other degrees, refer to the entries for individual universities in Part 4. All the universities listed, with the exception of Aberdeen, Cambridge, Durham, Oxford, Manchester (Faculty of Technology), state that physics at 'A' level is a course requirement. The others require mathematical subjects.

Aberdeen. B.Sc.(Eng.): 4 years. 2 'A' levels.

Belfast. B.Sc.: 3 or 4 years. 3 or 2 'A' levels.

Birmingham. B.Sc.: 3 years. 3 'A' levels.

Bristol. B.Sc.: 3 years. 2 'A' levels.

Cambridge. B.A.: 3 years.

Durham. B.Sc.: 3-year course in Engineering Science. 2 or 3 'A' levels.

Edinburgh. B.Sc.: 4 years. 3 'A' levels including Physics and Pure and Applied Mathematics.

Glasgow. B.Sc.: 4 years. 3 'A' levels.

Leeds. B.Sc.: 3 or 4 years. 2 'A' levels.

Leicester. B.Sc. Engineering: 3 years. 2 'A' levels.

Liverpool. B.Eng.: 3 years. 3 'A' levels.

London. B.Sc.(Eng.): (Imperial, Q.M.C., King's, University College, West Ham C.T., Woolwich Polytechnic): 3 years. 2 'A' levels.

Manchester. B.Sc.: 3 years. 2 'A' levels. **B.Sc. and A.M.C.S.T.:** 3 years. 3 'A' levels.

Newcastle. B.Sc.: 3 years. 2 'A' levels.

Nottingham. B.Sc.: 3 or 4 years. 3 or 2 'A' levels.

Oxford. B.A.: 3 years.

Reading. B.Sc. in Applied Electricity: 3 years. 2 'A' levels.

St. Andrews. B.Sc. in Applied Science: 4 years. 2 'A' levels.

Sheffield. B.Eng.: 3 years. 3 'A' levels.

Southampton. B.Sc.(Eng.): 3 years. 2 'A' levels.

Sussex. B.Sc.: 3 years. 2 'A' levels.

Warwick. B.Sc.: 3 years. 2 'A' levels.

Wales (Cardiff and Swansea). B.Sc.: 3 years, 3 'A' levels or approved H.N.C., H.N.D. 4 years, 2 'A' levels or approved O.N.C., O.N.D.

(ii) FORMER DIP.TECH. COURSE, DEGREES OF THE C.N.A.A.

The following courses now lead to degrees of the new universities

(4-year courses are sandwich courses). Good O.N.C. or O.N.D. passes will be accepted in lieu of stated 'A' level passes.

Battersea C.T. B.Sc.: 3 or 4 years. 3 'A' levels preferred.

Birmingham C.A.T. B.Sc.: 3 or 4 years. 2 'A' levels.

Bradford I.T. B.Tech.: 4 years. 2 'A' levels.

Bristol C.S.T. B.Sc.: 4 years. 2 'A' levels.

Brunel College. B.Tech.: 4 years. 2 'A' levels.

Heriot-Watt College. B.Sc.: 4 years. 2 'A' levels.

Loughborough C.T. B.Tech.: 4 years. 2 'A' levels.

Northampton C.A.T. B.Sc.: 4½ years. 2 'A' levels.

Salford Royal C.A.T. B.Sc.: 3 or 4 years. 2 'A' levels.

Strathclyde. B.Sc.: 4 years. 2 'A' levels.

Welsh C.A.T. B.Eng.(Tech.): 4 years. **B.Eng.:** 3 years. 2 'A' levels.

At the following colleges four-year sandwich courses lead to **honours degrees of the C.N.A.A.**

Borough Polytechnic; Brighton C.T.; Hatfield C.T.; Hendon C.T.; Huddersfield C.T.; Lanchester C.T.; Liverpool C.T.; Nottingham Regional C.T.; The Polytechnic, Regent Street; Portsmouth C.T.; Rugby College of Engineering Technology; Rutherford C.T.; Staffordshire C.T.; Sunderland Technical College; Woolwich Polytechnic; Dundee Technical College (full-time).

In addition, **B.Sc.(Eng.)** degree courses (London University unless otherwise stated) in Electrical Engineering are available at:

Robert Gordon's Technical College (Aberdeen degree); Paisley College of Technology; Bournemouth Municipal C.T.; South-West Essex Technical College; Hull C.T.; Medway C.T.; Enfield C.T.; Plymouth C.T.; Kingston C.T.; Belfast C.T. (4-year sandwich course, degree of Queen's University, Belfast).

(iii) UNIVERSITY DIPLOMAS AND CERTIFICATES

University of Birmingham: Postgraduate Diploma in Electrical Engineering (in power engineering and electrical machines). 1 year full-time.

University of London (Imperial College): D.I.C. in Electrical Machines and Power Systems, Electrical Traction, Materials in Electrical Engineering.

University of Newcastle: Postgraduate Diploma in Electrical Power Engineering.

COLLEGE DIPLOMAS AND ASSOCIATESHIPS

Courses are available as follows.

<u>College</u>	<u>Duration</u>	<u>Award</u>
Brighton College of Technology	3 years full-time 4 years sandwich	College Diploma
Derby and District College of Technology	4 years sandwich	ditto
Mid-Essex Technical College	4 years sandwich	ditto
Huddersfield College of Technology	4 years sandwich	College Associateship
Leeds College of Technology	24 weeks	College Diploma
The Polytechnic, Regent Street	3 years full-time	ditto
Southall Technical College	3 years sandwich	ditto
Twickenham College of Technology	4 years sandwich	ditto
Nottingham and District Technical College	4 years sandwich	ditto
Rotherham College of Technology	1 year full-time	College Associateship
Rugby College of Engineering and Technology	3 years full-time	College Diploma
West Ham College of Technology	3 years full-time	ditto
Glamorgan College of Technology	4 years sandwich	College Associateship

Also: Robert Gordon's Technical College, Associateship in Electrical Engineering; Dundee Technical College, Associateship in Electrical Engineering; Paisley College of Technology, Diploma in Electrical Engineering.

Diploma of Faraday House (D.F.H.).

NATIONAL CERTIFICATES AND DIPLOMAS

National Certificates are awarded after courses of part-time study.

The Ordinary National Certificate (O.N.C.) course is normally open to students who have had full-time education up to the age of 16 and have 4 appropriate G.C.E. 'O' level passes or have completed a 2-year General Engineering Course. O.N.C. is a 2-year course.

Higher National Certificate (H.N.C.) is awarded at the end of a further 2-year course for holders of O.N.C. National Diplomas are awarded on completion of full-time or sandwich courses.

Ordinary National Diploma (O.N.D.) courses are normally of 2 years' duration and are open to candidates of at least 16 years with G.C.E. 'O' level passes in Mathematics, a suitable science and two other subjects, or the equivalent, or candidates who have completed the General Engineering Course.

Higher National Diploma (H.N.D.) sandwich courses are normally of 3 years' duration and are open to students not less than

18 years old with an 'A' level pass in Physics or Mathematics and 4 other 'O' level passes or O.N.C. or O.N.D. credits.

Courses leading to H.N.D. in electrical engineering (mostly 3 years sandwich) are conducted at the following institutions:

Aston Technical College; South Birmingham Technical College; Bristol Technical College; Cambridgeshire College of Arts and Technology; Lanchester College of Technology, Coventry; Derby and District College of Technology; Mid-Essex Technical College; South-East Essex College of Technology; Farnborough Technical College; Letchworth College of Technology; Watford College of Technology; Huddersfield College of Technology; Hull College of Technology; Medway College of Technology; Leeds College of Technology; Leicester College of Technology; Liverpool College of Technology; South-East London Technical College; Luton College of Technology; John Dalton College, Manchester; Constantine College of Technology; Enfield College of Technology; Hendon College of Technology; Southall Technical College; Rutherford College of Technology; Newport and Monmouthshire College of Technology; Norwich City College; Nottingham and District Technical College; Plymouth College of Technology; Portsmouth College of Technology; The Harris College of Further Education; Reading College of Technology; Rotherham College of Technology; St. Helens Technical College; Sheffield College of Technology; Southampton Technical College; North Staffordshire College of Technology; Sunderland Technical College; Kingston College of Technology; West Ham College of Technology; Malvern College of Electronics; Denbighshire Technical College; Glamorgan College of Technology; Robert Gordon's Technical College; Paisley College of Technology.

CITY AND GUILDS OF LONDON INSTITUTE EXAMINATIONS

C.G.L.I. examinations are held in the following subjects:

Electrical Installation Work (Subject No. 51)

Electrical Engineering Practice (Subject No. 52) (Preliminary, Intermediate and Final)

Electrical Technician's Courses (Subject No. 57, Intermediate and Final; Endorsement Subjects: Generation, Transmission and Distribution, Utilisation, Instrumentation, Industrial Electronics, Industrial Control Systems)

Electrical Fitter's Courses (Subject No. 58).

For overseas students: O.N.C., H.N.C. in Electrical Engineering (Subjects 304, 305); Ordinary Technical Diploma in Mechanical and Electrical Engineering.

CERTIFICATES OF THE REGIONAL EXAMINING UNIONS

The following Unions hold Electrical Engineering examinations:

Union of Lancashire and Cheshire Institutes; Northern Counties Technical Examinations Council; Union of Educational Institutions; East Midland Educational Union; Yorkshire Council for Further Education; Welsh Joint Education Committee.

The Examinations are:

National Certificates in Electrical Engineering; Electrical Technicians; Electrical Installation; Electrical Installation Craft Practice; Electrical Fitters Craft Practice; Electrical Workshop Course; Electrical Fitters.

ELECTRONICS AND RADIO ENGINEERING

The Institution of Electronic and Radio Engineers

(founded 1925)

8-9, Bedford Square, London, W.C.1

Members (M.I.E.R.E.) of the Institution must be at least 30 years of age and have passed or gained exemption from the Institution's Graduateship examination (or submitted a thesis in lieu of this). In addition, a candidate must have been engaged as a radio and electronic engineer for not less than 10 years, five years of which was in a position of superior responsibility or in research.

Associate Members (A.M.I.E.R.E.) must be at least 27 years of age, have passed or gained exemption from the Graduateship examination (or submitted a thesis in lieu of this) and have been engaged as a radio and electronic engineer for at least five years. In addition, a candidate must have had at least three years' responsible experience as a radio engineer or research worker.

Graduates (Grad.I.E.R.E.) must be at least 21 years of age and have passed the Institution's Graduateship examination or gained exemption from it, and have received, or been receiving, appropriate full-time training.

Students must be at least 18 years of age and have passed a prescribed preliminary examination and be receiving approved full-time training.

Companions (Companion I.E.R.E.) are not radio engineers by profession but have rendered important services to Radio Engineering in the fields of Commerce, Law, Finance, or Science.

Associates (A.I.E.R.E.) must be of good education and at least 27 years of age. They must produce evidence of satisfactory technical knowledge and have held a position of responsibility for at least five years as a radio engineer.

EXAMINATION

The Institution's Graduateship examination is open only to

candidates who have satisfied the Preliminary Qualifications requirements and are Students or Associates of the Institution.

The examination is in five parts. Parts 1 to 4 are divided into two sub-parts. Parts 1 to 3(i) comprise section A; 3(ii) to 5 section B.

Courses for the Graduateship examination are conducted at:
 Norwood Technical College (3 years full-time); Northern Polytechnic (3 years full-time); Plymouth College of Technology (1 year full-time); West Ham College of Technology (3 years full-time).

Complete exemption from the examination is gained by holders of approved degrees in Engineering with Radio or Electronics subjects, Dip.Tech.(Eng.) with Radio or Electronics subjects, Dip.Tech.(Applied Physics) with postgraduate training in radio and electronic engineering; Postgraduate diplomas in radio or electronic engineering of British universities (with adequate preliminary qualifications); Diploma in Electronic Engineering, Bolton T.C. (1959-63, from 1964 parts 1, 2, 3, 4); Diplomas in Electronics and Communications, Southampton T.C. (1959-65); College Diplomas in Electrical Engineering (including Electronics and Communications), Brighton T.C.; Diploma in Communications, Regent Street Polytechnic; Diploma in Telecommunications Engineering, Northern Polytechnic; Diploma in Telecommunications Engineering, Norwood Technical College; Degree and postgraduate course, H.M.S. *Collingwood*; Technical Staff Course (appropriate subjects), R.M.C. of Science, Shrivenham; Technical Officer Course, R.A.F. Henlow.

Exemptions from parts 1, 2 and 3 are gained by holders of degrees in physics and pure and applied mathematics.

Higher National Diplomas with radio and electronics subjects can gain exemption up to parts 1 to 4, Higher National Certificate with endorsements in physics and endorsement in Radio or Electronic Engineering subjects will gain complete exemption, others partial exemption.

Various degrees of exemption are afforded by the various C.G.L.I. certificates. Further details of these and other exemptions gained by holders of overseas qualifications may be obtained from the Institution.

Society of Electronic and Radio Technicians

33, Bedford Street, London, W.C.2

Members (M.S.E.R.T.) must be at least 30 years of age and have been engaged for at least 10 years as an electronic and radio

technician. They must also have at least five years' experience in radio and electronics technology and have one of the following qualifications or its equivalent: H.N.C. in Electrical Engineering with Electronics; C.G.L.I. Telecommunications Technician's Certificate; C.G.L.I. Electrical Technician's Certificate (Electronics specialist subject); Radio Trades and C.G.L.I. Final Certificate in Radio and Television Servicing or Electronic Servicing; P.M.G. Certificate (1st Class) in Wireless Telegraphy or (2nd Class) and M.O.T. Radar Maintenance Certificate. In addition, various Service qualifications are accepted.

Associates (A.S.E.R.T.) must be at least 21 years of age and possess one of the qualifications listed above. In addition they must have at least three years' approved experience as an electronic and radio technician.

Students must be at least 17 years of age and be receiving an approved course of training. In addition they must have passed the preliminary requirements which are: O.N.C. in Engineering or intermediate or first part of the C.G.L.I. and other examinations listed above.

UNIVERSITY DEGREES AND DIPLOMAS

(i) FIRST DEGREES

Honours degree courses are offered at the following universities. For details of higher and other degrees, refer to entries under individual universities in Part 4. All the universities specify 'A' level Physics as a course requirement. The other 'A' level passes required are in Mathematical subjects.

Birmingham. B.Sc.: 3 years. 3 'A' levels.

Kent. B.Sc.: 3 years. 3 'A' levels including Physics and Chemistry.

Leeds. B.Sc. in Electrical and Electronic Engineering: 3 or 4 years. 2 'A' levels.

Liverpool. B.Eng.: 3 or 4 years. 3 'A' levels.

Manchester. B.Sc. or B.Tech. (with Physics): 3 years. 2 or 3 'A' levels.

Sheffield. B.Eng.: 3 years. 3 'A' levels.

Southampton. B.Sc.(Eng.): 3 years. 2 'A' levels, or O.N.D., O.N.C. **B.Sc.:** 3 years. 3 'A' levels.

Sussex. B.Sc. in Electrical Engineering Science and Electronics: 3 years. 2 'A' levels.

Wales (Bangor). B.Sc.: 3 years. 3 'A' levels or approved H.N.C.

Wales (Swansea). B.Sc. in Electrical Engineering (including Electronic Engineering): 3 'A' levels or approved H.N.C.

(ii) DIPLOMAS AND CERTIFICATES

University of London (Imperial College): 1-year postgraduate Diploma in Communications and Electronics (D.I.C.). Also in Electronic Physics.

University of London (University College): 1-year postgraduate Diploma in Microwave Engineering.

University of Newcastle: 1-year postgraduate Diploma in Applied Electronics. (Also 1-year Certificate course.)

University of Southampton: 1-year postgraduate Diploma in Electronics.

University of Edinburgh: 1-year postgraduate Diploma in Electronics and Radio.

(ii) FORMER DIP. TECH. COURSES, DEGREES OF THE C.N.A.A.

The following courses now lead to honours degrees of the new universities:

Northampton C.A.T. B.Sc.: 4½-year sandwich course in Electrical and Electronic Engineering.

Salford Royal C.A.T. B.Sc.: 3 years. 2 'A' levels required.

The following courses will lead to the **honours degree of the C.N.A.A.:**

Northern Polytechnic: The Physics and Technology of Electronics. 4-year sandwich course.

Staffordshire C.T.: Electronics Engineering. 4½-year sandwich course.

Other Dip.Tech. courses including Radio and Electronic Engineering were conducted at: Brunel College; Birmingham C.A.T.; Bradford I.T.; Bristol C.S.T.; Welsh C.A.T.; Farnborough C.T.; Hatfield C.T.; Battersea C.T.; Borough Polytechnic; Woolwich Polytechnic; Loughborough C.T.; Portsmouth C.T.

NATIONAL CERTIFICATES AND DIPLOMAS

Courses for the **Higher National Diploma (H.N.D.)** are normally sandwich courses of 3 years' duration, for students not less than 18 years of age with passes at 'A' level in Physics and Mathematics.

There are a large number of colleges that offer National Certificate courses. The combined **Ordinary National Certificate (O.N.C.)** and **Higher National Certificate (H.N.C.)** course normally takes 5 years and is open to students with G.C.E. 'O' levels in English, Mathematics, Physics, and one other subject, or to students who pass the General Engineering course. The H.N.C.

is in Electrical Engineering and it is possible to take suitable Electronics or Radio subjects or post-certificate endorsements.

The following colleges offer H.N.D. courses in Radio and Electronic Engineering:

Cambridge Technical College and School of Art; Mid-Essex Technical College and School of Art; Hatfield College of Technology; Hendon College of Technology; Kingston Technical College; Leeds College of Technology; South-East London Technical College; Malvern College of Electronics; Constantine Technical College; Nottingham Technical College; Plymouth Technical College; Portsmouth College of Technology; Southall Technical College; Sunderland Technical College.

COLLEGE ASSOCIATESHIPS AND DIPLOMAS

Courses are offered at the following colleges:

Bolton Technical College (3 years full-time). College Diploma in Electronics.

Northern Polytechnic (3 years full-time). College Diploma.

Norwood Technical College (3 years full-time). College Diploma.

The Polytechnic, Regent Street (3 years full-time). College Diploma.

College Associateship and Diplomas are also awarded at Brighton College of Technology; Dundee Technical College; Glasgow Royal Technical College; Southampton Technical College.

CITY AND GUILDS OF LONDON INSTITUTE EXAMINATIONS

C.G.L.I. examinations are set in the following subjects:

Electronics Servicing (Subject No. 47) (Intermediate and Final)

Radio and Television Servicing (Subject No. 48) (Intermediate and Final)

Telecommunications Technician's Course (Subject No. 49)

Radio Servicing Theory (Subject No. 53) (Overseas centres only)

Radio Amateurs' Examination (Subject No. 55)

Supplementary Studies in Telecommunications and Electronics (Subject No. 300) (Advanced Telecommunications and Electronics Principles; Communication Radio; Basic Microwave Techniques; Microwave Radio Relay Systems;

Radar and Radio Navigation Aids; Advanced Line Transmission; Sound Broadcasting; Television Broadcasting; Advanced Telephony; Digital Computers; Analogue Computers).

CERTIFICATES OF THE REGIONAL EXAMINING UNIONS

The Union of Lancashire and Cheshire Institutes, Northern Counties Technical Examinations Council, Union of Educational Institutions, East Midland Educational Union, Yorkshire Council for Further Education and the Welsh Joint Education Committee all hold examinations.

Examinations held by the various Boards are: National Certificates in Electrical Engineering; Radio and Television Servicing; Telecommunications Technician's Course.

OTHER EXAMINATIONS

Marine Radio Officer's Course. P.M.G. Certificate of Proficiency in Wireless Telegraphy and Telephony is obtained after 2 years' study. First Class Certificate is the full certificate and it follows award of the Second Class Certificate. The entrance level to the course is roughly that of last year secondary school.

The Board of Trade Certificate in Radar Maintenance is awarded for an extra term of study by holders of the First Class Certificate.

GAS ENGINEERING

The Institution of Gas Engineers

17, Grosvenor Gardens, London, S.W.1

Members (M.I.Gas E.) are entitled to describe themselves as 'Chartered Gas Engineers'. They must be at least 30 years of age, and have held a responsible engineering position in the gas industry for at least five years and be either an Associate Member of the Institution or a corporate member of the Institution of Civil Engineers, or possess an approved university degree in engineering or fuel technology. Alternatively, they must have had a suitable education and training in the industry (in the opinion of two-thirds of the Council), and have held a responsible engineering position in the industry for at least 15 years and acquired a considerable degree of eminence as a gas engineer.

Associate Members (A.M.I.Gas E.) are entitled to describe themselves as 'Chartered Gas Engineers'. They must be at least 25 years of age, have passed or been exempted from the Associate Membership examination and have had at least five years' approved practical training for a responsible engineering position in the gas industry.

Companions (C.I.Gas E.) must occupy a distinguished position in science or industry or in a profession having interests in common with engineering in the gas industry.

Associates (Assoc.I.Gas E.) are at least 25 years of age and considered by reason of having sufficient professional knowledge or experience to assist in the promotion of the objects of the Institution.

Graduates (Grad.I.Gas E.) must be at least 25 but not more than 40 years of age. They must pass or be exempted from Part I and Group B Section 1 of Part II of the Associate Membership of the Institution, and have had or be receiving approved practical training in the gas industry.

Students (Stud.I.Gas E.) must be at least 17 but not more than 25 years of age and have passed or been exempted from the Common Preliminary examination of the Engineering Joint Examination Board. They must also study for the Associate Membership examination or for an approved other qualification.

The Institution also elects **Honorary Life Members (Hon. Life M.I.Gas E.)** and **Honorary Members (Hon.M.I.Gas E.)**.

EXAMINATIONS

The Associate Membership Examination consists of Part I (sections A and B), conducted by the Engineering Institutions' Examination Standing Committee and the I.C.E., and the Part II Group B examination conducted by the I.C.E. and the I.Gas E.

Complete exemption is gained by holders of approved degrees in engineering or fuel technology, Associateships in Civil, Mechanical, Electrical or Chemical Engineering or Applied Chemistry of the Royal College of Science and Technology, Glasgow, or of the Heriot-Watt College. Exemption is also granted to candidates who have completed an approved four-year sandwich course in engineering.

Graduates of courses which do not cover the scope of the syllabuses for the Part II Group B examination may gain complete exemption by taking the necessary subjects, on a subject-for-subject basis.

Exemption from Part I and Part II Group B (Section 1) only is gained by candidates completing approved three-year sandwich courses, and by holders of approved H.N.C. and H.N.D.

qualifications on a subject-for-subject basis, and by candidates who have passed the I.C.E., I.E.E., I.Mech.E. examinations. Partial exemption is granted to candidates who have passed the I.Chem.E. examinations.

The Preliminary Examination must be passed by all candidates to whom exemption is not granted. Several examinations will provide exemption including G.C.E. 'O' level passes in English, Mathematics and two approved science subjects, or one science subject and one approved foreign language.

DEGREE AND DIPLOMAS

(i) UNIVERSITY DEGREE

Heriot-Watt College. B.Sc.: 4-year sandwich course in Civil Engineering for Gas Engineers. 2 'A' level passes required including Pure and Applied Mathematics.

(ii) UNIVERSITY DIPLOMAS

University of Leeds: 1 year. Postgraduate Diploma in Gas Engineering.

Royal C.A.T., Salford. Honours Associateship: 4 years sandwich.

CITY AND GUILDS OF LONDON INSTITUTE EXAMINATIONS

The C.G.L.I. conducts the following examinations:

Gas Utilisation (Subject No. 12) (Intermediate and Final).

Gas Fitting (Subject No. 13) (Intermediate and Final).

EXAMINATIONS OF THE REGIONAL EXAMINING UNIONS

The Northern Counties Technical Examinations Council and the Union of Lancashire and Cheshire Institutes conduct examinations in Gas Fitting.

HEATING AND VENTILATING ENGINEERING

The Institution of Heating and Ventilating Engineers

49, Cadogan Square, London, S.W.1

Member (M.I.H.V.E.). This is the senior grade of membership of the Institution.

Associate Members (A.M.I.H.V.E.) must be at least 25 years of age and have passed the Associate Membership examinations or gained exemption from them. They must, in addition, have received regular scientific or engineering training in Heating or Ventilating Engineering and had sufficient experience in it. Candidates over 33 years of age who have received a good general and scientific training and have been employed for a sufficient period in Heating or Ventilating Engineering may be allowed to submit a thesis in lieu of parts of the examination.

Graduates must be at least 21 years of age and not more than 30 years of age. They must have passed prescribed parts of the Associate Membership examination (Part A) or have gained exemption from it. They must also be receiving or have received regular training in Heating or Ventilating Engineering.

Student Members must be at least 16 years of age and not more than 25 years of age. They must have passed the preliminary qualifying examination or gained exemption from it. This is provided by (i) G.C.E. 'O' level passes in English, Mathematics and either two approved science subjects or one science subject and one foreign language. (ii) Enrolment on a recognised course of study (e.g. O.N.C. in Engineering).

EXAMINATION

The Associateship Examination consists of three sections, A, B and C. Section A is the Engineering Institutions' Part I examination.

Exemption from Section A is gained by (i) degrees in Mechanical, Electrical or Chemical Engineering, or Physics; (ii) a large number of recognised diplomas and certificates in engineering, including certain O.N.C. and O.N.D. qualifications. Partial exemption from section A is gained by holders of other O.N.C. or O.N.D. qualifications, and by persons who have passed Part I examinations of some of the engineering institutions, as well as certain subjects in G.C.E. 'A' level.

Exemption from Section B is gained by holders of the Diploma or Associateship of the National College for Heating, Ventilating, Refrigeration and Fan Engineering; Diplomas in Refrigeration; National College Higher Diploma in Environmental Engineering; Diploma in Heating and Ventilating and Air Conditioning, Rutherford College of Technology; H.N.D. in Mechanical Engineering (Heating and Ventilating final year subjects); Endorsement H.N.C. in Mechanical Engineering (Air Conditioning, Heating and Ventilating); I.Mech.E. Parts I and II with Air Conditioning,

Heating and Ventilating Engineering as optional passes in Group C.

Exemption from Section C is gained by holders of Associateship Diplomas in Heating, Ventilating or Fan Engineering; Diploma in Refrigeration (all at the National College for Heating, Ventilating, Refrigeration and Fan Engineering); Rutherford College of Technology Diplomas in Heating, Ventilating and Air Conditioning.

UNIVERSITY DEGREE

Strathclyde. B.Sc. in Environmental Control Engineering: 4-year course. 2 'A' levels required, including Pure and Applied Mathematics.

COLLEGE DIPLOMAS AND CERTIFICATES

At the National College for Heating, Ventilating, Refrigeration and Fan Engineering (Borough Polytechnic, London).

Diploma in Heating and Ventilating: 1-year full-time course. Candidates must be 18 years of age and have O.N.C. in Mechanical Engineering with Applied Heat or G.C.E. 'A' level passes in Physics and four other 'O' level passes.

Higher Diploma in Environmental Engineering: 3-year sandwich course. Candidates must be 18 years of age and possess G.C.E. 'A' level in Physics or Mathematics and 4 other 'O' level passes or O.N.C. in Mechanical Engineering including Applied Heat with credits in all subjects.

Postgraduate Associateship (Advanced Study) or (Research): 1-year courses. Candidates must be at least 18 years of age and possess one of the following: Diploma or Higher Diploma of the College; H.N.C. or H.N.D. in Mechanical Engineering; Degree in Mathematics, Physics or Engineering; Dip.Tech.; Rutherford College of Technology Diplomas in Heating, Ventilating and Air Conditioning.

CITY AND GUILDS OF LONDON INSTITUTE EXAMINATIONS

C.G.L.I. examinations are held in the following subjects:

Heating and Ventilating Engineering Technician's Course
(Subject No. 181)

Fitter's Course (Subject No. 255)

Fitter/Welder's Course (oxy-acetylene) (Subject No. 256)

Fitter/Welder's Course (metal-arc) (Subject No. 257)

Draughtsmen's Course (Subject No. 259).

EXAMINATION OF THE REGIONAL EXAMINING UNIONS

UNION OF LANCASHIRE AND CHESHIRE INSTITUTES

An examination for the Heating and Ventilating Engineer's course is conducted.

ILLUMINATING ENGINEERING

The Illuminating Engineering Society

York House, Westminster Bridge Road, London, S.W.1

Honorary Members are distinguished persons whom the Society wishes to honour for services rendered to the Society.

Honorary Fellows are persons of acknowledged eminence in some branch of science related to lighting.

Fellows (F.I.E.S.) are members of the Society who have reached an outstanding position or made important contributions to lighting. Fellowship is a distinction and is not awarded on the basis of academic qualifications.

Corporate Membership is open to any person over the age of 21.

Diploma Members (Dip.M.I.E.S.) must be corporate members of at least three years' standing and at least 25 years of age. They must also have passed the examinations listed below, or in exceptional circumstances present a thesis. In addition at least five years' experience in lighting practice is required and satisfactory knowledge of a subject ancillary to lighting is required.

C.G.L.I. certificate in Advanced Lighting; I.E.E. examination part III (Illuminating Engineering special subject); H.N.C. in Electrical Engineering (Illuminating Engineering endorsement subject); or equivalent.

Holders of British degrees or Dip.Tech.'s, Corporate members of appropriate professional institutions may be awarded the Diploma if the examinations are of a standard not inferior to the C.G.L.I. Certificate in Lighting Technology.

Ancillary subject requirements are fulfilled by holders of: O.N.C. in Engineering or Engineering Installation Examinations part I, O.N.C. in Applied Physics or G.C.E. 'A' level in Physics; Intermediate examination of R.I.B.A.

Students may not be older than 26 years of age.

AWARD

I.E.S. Technical Certificate may be awarded to Students of not less than three years' standing and corporate members of not less than 21 years of age, who have (i) obtained C.G.L.I. certificate in Lighting Technology or equivalent; (ii) obtained G.C.E. 'A' level passes in two subjects, and one other at 'O' level, including Mathematics or an approved O.N.C. or an equivalent certificate in Architecture, Art and Design, or Optics. In addition they must provide evidence of adequate practical experience and competence in Lighting Technology.

The Association of Public Lighting Engineers

Buckingham Court, 76, Buckingham Gate, London, S.W.1

Members must be at least 30 years of age and in a responsible position as a public lighting engineer to a statutory public lighting or similar body or are responsible for design or development of public lighting equipment or installations.

In addition they must hold the Diploma of the Association or be an Associate Member or Corporate Member of the Institutions of Electrical Engineers, Gas Engineers, Mechanical Engineers, Civil Engineers or Municipal Engineers, or have five years' responsible experience in public lighting design or development and satisfy the Council as to their educational and technical training in public lighting.

Associate Members must be at least 28 years of age and have held for at least eight years a responsible position professionally engaged in public lighting or design or development of public lighting equipment or installations. Or candidates must possess the C.G.L.I. certificate in Illuminating Engineering or an approved British university degree and have five years' suitable experience.

Associates are persons not qualified as corporate members but who can satisfy the Council that they have rendered or can render service to public lighting, or in design or development of public lighting installations or equipment.

Students must not be less than 18 years of age and have passed the C.G.L.I. Intermediate examination in Illuminating Engineering or undergoing training for public lighting work.

AWARDS

Diplomas in Public Lighting. The requirements are:

- (i) Technical experience in public lighting and administrative experience in an approved business undertaking. The

candidate must have served for at least five years in an approved position on the staff of a public lighting department or have been engaged in design or development.

- (ii) Theoretical and practical knowledge of Illuminating Engineering and Public Lighting Engineering. The candidate must have a standard of education equivalent to four years at a grammar school and hold exemption from O.N.C. in Applied Physics or C.G.L.I. Full Technological Certificate in Gas Technology or the equivalent, and a pass in C.G.L.I. Intermediate Grade examination in Illuminating Engineering.
- (iii) The candidate must submit a written thesis and attend an oral examination.

CITY AND GUILDS OF LONDON INSTITUTE EXAMINATIONS

The C.G.L.I. conducts the following examinations:

Illuminating Engineering (Subject No. 113) (i) Lighting Technology; (ii) Advanced Lighting Technology. For the latter, candidates must have passed I.E.E. part III examinations in Lighting Technology or in Illuminating Engineering or obtained Illuminating Engineering endorsement for H.N.C.

ENGINEERING INSPECTION

The Institution of Engineering Inspection

616, Grand Buildings, Trafalgar Square, London, W.C.2

Honorary Corporate Members (Hon.M.I.E.I.) are limited in number and have rendered conspicuous service to the Institution.

Members (M.I.E.I.) must be at least 30 years of age and qualified by training and experience to take full responsibility in Engineering Inspection or Quality Control. Associate Members may be transferred if they are 30 years of age, and have had at least five years' responsible experience in Engineering Inspection or Quality Control, and indicate the widening of their experience, increase in responsibility, improvement of qualifications since their election. Candidates may be required to submit a thesis.

Honorary Members are limited in number and are in a

position to render conspicuous service to the Institution, but are not eligible for corporate membership.

Associate Members (A.M.I.E.I.) must be at least 25 years of age and passed or been exempted from the Institution's examination and have had sufficient approved experience. Candidates must pass parts I, II and III of the examination and have two years' approved experience or, if exempt from the examination, pass the examination in subjects for which exemption cannot be claimed. Candidates at least 35 years in age must have at least five years' responsible experience and submit details of special or meritorious work in which they have been engaged. Candidates may be required to submit a thesis.

Companions are persons in educational, technical or commercial positions of responsibility or influence connected with engineering and allied interest whose admission would conduce to the interests of the Institution or who have made distinguished contributions in the field of Engineering Inspection or Quality Control.

Associates are at least 23 years of age and have served an apprenticeship or pupilage in engineering, but are not eligible for corporate membership.

Graduates (Grad.I.E.I.) are between 21 and 40 years of age and have passed parts I or II of the Institution's examination, or the parts for which they are not granted exemption. They must also submit evidence that they are acquiring approved experience.

Students are between the ages of 18 and 25 and have passed part I of the Institution's examination or gained exemption from it.

EXAMINATIONS

The Institution's Examinations consist of three Parts.

Part I is intended to test a candidate's knowledge of English and basic science subjects.

Part II is a test of technical knowledge in two selected Engineering Inspection subjects.

Part III consists of a single paper on Organisation and Management of Inspection.

Complete Exemption is granted to holders of degrees of approved universities in Engineering, Chemistry, Physics or Mathematics; to those who have complete qualifications required for admission to Corporate Membership of any of the chartered professional engineering institutions conducting their own examinations; certain College Diplomas and Certificates approved by the Institution.

Partial Exemption from Part II is granted to holders of specified H.N.C.'s and C.G.L.I. Certificates, and complete exemption from Parts I and II for holders of H.N.D.'s. Partial exemption is granted from Part I to holders of passes in 'O' level and specified O.N.C.'s.

HIGHWAY ENGINEERING

The Institution of Highway Engineers

14, Queen Anne's Gate, London, S.W.1

Fellows of the Institution are elected at the discretion of the Council of the Institution.

Members (M.Inst.H.E.) must be at least 30 years of age and either be or be eligible to be an Associate Member of the Institution and have been engaged for a sufficient period in an important position of independent responsibility in connection with Highway Engineering. Alternatively, members must be of at least 40 years of age and have had at least 15 years' employment in positions of responsibility for the design or execution of important highway engineering works, and acquired a sufficient degree of eminence as a highway engineer.

Honorary Membership is conferred on non-members of eminence or distinction.

Associate Members (A.M.Inst.H.E.) must be at least 22 years of age and hold one of: (i) U.K. degree in Civil Engineering, (ii) A.M.I.E.E., having passed the appropriate examination, (iii) Testamur or Certificate in County and Highway Engineering of the Institution of Municipal Engineers, or other approved academic qualifications. In addition, the candidate must hold an appointment involving responsible control or design or advisory work in Highway Engineering, and satisfy the Council that he has had adequate experience.

Students must be at least 17 and not more than 25 years of age and have passed a university matriculation examination or equivalent, and be acquiring approved training and experience in highway engineering.

Affiliates are not highway engineers by profession but are qualified to contribute substantially to the advancement of professional knowledge in Highway Engineering.

Service Members are Commissioned Officers whose duties embrace, or have embraced, Highway Engineering and whose qualifications or experience are adequate.

EXAMINATION

Diploma in Traffic Engineering (Dip.T.E.) is obtained by examination and is open to Fellows, Members, Associate Members and Students of graduate standing.

UNIVERSITY DIPLOMAS AND CERTIFICATES

University of Birmingham: Postgraduate Diploma in Highway Engineering. 1-year course.

University of Newcastle: Postgraduate Diploma in Highway and Traffic Engineering. 1-year course.

Imperial College, London: Diploma (D.I.C.) in Highway Engineering. 1-year course.

CITY AND GUILDS OF LONDON INSTITUTE EXAMINATIONS

The C.G.L.I. holds examinations for the Traffic Engineering Technician's Certificate (Subject No. 317) and in Roadwork (Subject No. 99).

LOCOMOTIVE ENGINEERING

The Institution of Locomotive Engineers

Locomotive House, 30, Buckingham Gate, London, S.W.1

Honorary Members (Hon.M.I.Loco.E.) are persons elected in recognition of attainments connected with or outstanding service rendered to the objects of the Institution.

Members (M.I.Loco.E.) must have attained an established reputation in the profession and must have been an Associate Member or possess the qualifications required for Associate Membership and have been engaged for a sufficient period in an important position of responsibility in the profession, and be at least 30 years of age. Alternatively they must have such knowledge of locomotive science or practice that election would forward the interests of the Institution.

Associate Members (A.M.I.Loco.E.) must be at least 25 years of age, educated as an Electrical or Mechanical Engineer, and have held a responsible position in Locomotive Engineering for a sufficient period of time.

The educational requirements for Associate Membership are: (i) Associate Membership examinations of the Institutions of Civil, Mechanical or Electrical Engineers, (ii) Engineering degree of U.K. university containing approved mechanical or electrical content, (iii) approved College Diploma, Certificate or Associateship.

Associates (Assoc.I.Loco.E.) must be at least 27 years of age, be actively interested in Locomotive Engineering and have attained a position of responsibility in it, but not qualify for corporate membership.

Graduates (G.I.Loco.E.) must be at least 21 years of age, have received a good general education, have received or be receiving adequate training in Engineering and be engaged in Locomotive Engineering.

Students (S.I.Loco.E.) must be at least 17 years of age, have received a good general education, and be undergoing adequate training in Mechanical or Electrical Engineering.

COLLEGE DIPLOMA

Derby and District College of Technology: 5-year sandwich course. College Diploma for British Railways.

MARINE ENGINEERING

(*See also Naval Architecture, page 855.*)

The Institute of Marine Engineers

The Memorial Building, 76, Mark Lane, London, E.C.3

Members (M.I.Mar.E.) must be at least 35 years of age, or if under 35 have been an Associate Member for at least five years. They must hold a position of responsibility in Engineering or Shipbuilding and shall: (i) be engineers with First Class Certificate of Competency of the M.o.T., or its equivalent, and have at least three subsequent years of approved responsibility *or* (ii) be naval officers qualified in Marine Engineering of or above the rank of Lt.-Commander *or* (iii) have served approved Engineering or Shipbuilding apprenticeship of not less than four years, and held for at least five years a position of approved responsibility *or* (iv) have

approved university degree in Naval Engineering or Naval Architecture with at least two years' approved practical experience and five years' approved responsibility *or* (v) have attained a position of eminence in the profession.

Companions must be at least 35 years of age and, although not eligible for admission as Members, have held for at least five years a position of eminence in the profession.

Associates are persons with technical responsibility who (i) have an approved university degree or recognised diploma in Engineering *or* (ii) are at least 25 years of age and have held for at least three years a professional position of responsibility in Shipping, Engineering, Shipbuilding or an allied industry *or* (iii) have the qualifications for election as Graduates, but are over 30 years of age, *or* (iv) have been previously elected as Graduates of the Institute and are at least 35 years of age but have not attained the qualifications required for admission to corporate membership.

Associate Members (A.M.I.Mar.E.) must be at least 25 years of age and hold a position of responsibility in Engineering or Shipbuilding and (i) have had an Engineering training of not less than four years and hold a First Class Certificate of Competency issued by the M.o.T. or an equivalent qualification *or* (ii) are naval officers qualified in Marine Engineering of the rank of Lieutenant in the Royal Navy and have had not less than three years' practical experience as an officer since qualifying *or* (iii) have served an Engineering or Shipbuilding apprenticeship of not less than four years or have an approved university degree or recognised diploma in Engineering or Naval Architecture and not less than two years' practical Engineering or Shipbuilding experience. Candidates must have held a position of responsibility for at least three years in Engineering or Shipbuilding and must in addition have passed the Institute's examination for this grade.

Graduates are between 20 and 30 years of age and (i) hold a Second Class Certificate of Competency issued by the M.o.T. or an equivalent qualification *or* (ii) are naval officers qualified in Marine Engineering of the rank of Sub-Lieutenant in the Royal Navy and have had not less than two years' practical experience as an officer since qualifying *or* (iii) have completed a recognised training in Engineering or Shipbuilding, and have passed such sections of the Associate Membership Examination as may be prescribed by the Council's Examination Rules or exempting examinations.

Students must be not older than 25 years of age and intend to become apprentices or students of Engineering at an approved institution and have passed qualifying examinations, or be naval

officers undergoing training in Marine Engineering and are of the rank of Sub-Lieutenant.

EXAMINATIONS

The Institute's Examination for Associate Membership is in three parts.

Part I tests the candidate's knowledge of the more elementary principles of Engineering Science.

Part II (conducted jointly with the I.Mech.E.) consists of three compulsory and one optional papers.

Part III consists of one paper on the Elements of Management and Administration.

Exemption from Parts I and II may be claimed by holders of most U.K. degrees in Engineering (Oxford degree does not exempt from Engineering Drawing in Part I); H.N.D. in Mechanical Engineering; H.N.C. in Mechanical Engineering (on subject-for-subject basis); College Diplomas—Associateship of C. and G. Engineering College; King's College, London; University College, London; Royal Technical College, Glasgow; Heriot-Watt College; Loughborough College of Technology.

Exemption from Part I only will be granted to holders of College Associateships and Diplomas in Engineering other than those above; H.N.D., H.N.C. (Credit levels) in Engineering subjects; Royal Dockyard Technical College examinations.

Exemption from Part III is gained by graduates of certain approved courses in connection with other qualifications; holders of honours degrees in engineering at U.K. universities; Part III of the I.Mech.E. Associateship examination; Examination in Introduction to Industrial Management, Royal Technical College, Glasgow; Engineering Administration, University of Newcastle.

UNIVERSITY DEGREE

Newcastle. B.Sc. in Marine Engineering: 3 years. 3 or 2 'A' level passes including Physics, Pure and Applied Mathematics required. A course for the B.Sc.(Eng.) in Marine Engineering is offered at Sunderland Technical College.

NATIONAL DIPLOMA

The Ordinary National Diploma (O.N.D.) in Engineering is taken by boys wishing to become sea-going engineers. Endorsements in marine engineering subjects are then gained by further study.

CITY AND GUILDS OF LONDON INSTITUTE EXAMINATIONS

The C.G.L.I. conducts the following examinations:

Marine Plumbing (Subject No. 87). Ordinary and Advanced Craft, Full Technological Certificates.

Shipbuilding (Subject No. 182). Craft and Advanced Craft Certificates.

Ship Joinery (Subject No. 183) (Intermediate and Final).

Yacht and Boat Building (Subject No. 184) (Intermediate and Final).

Shipbuilding Technician's Certificate (Subject No. 289).

Shipbuilding Crafts (Subject No. 299). Full Technological Certificate.

General Course in Shipbuilding (Subject No. 322).

EXAMINATIONS OF THE REGIONAL EXAMINING UNIONS

The Northern Counties Technical Examinations Council and the Union of Lancashire and Cheshire Institutes conduct examinations for the General Course in Shipbuilding.

OTHER EXAMINATIONS

Ministry of Transport Certificates of Competency. *See* Navigation and Seamanship (page 868).

MECHANICAL ENGINEERING

The Institution of Mechanical Engineers

1, Birdcage Walk, Westminster, London, S.W.1

Honorary Members (Hon.M.I.Mech.E.) are persons of distinguished scientific attainment, or of distinction in Engineering, or of eminence who have given distinguished service to the Institution.

Members (M.I.Mech.E.) must have acquired an established reputation as a mechanical engineer and (i) be at least 33 years of age and have been an Associate Member and have been engaged for a sufficient period in an important position of responsibility in Engineering, *or* (ii) be at least 35 years of age and have the qualifications required for Associate Membership and have been engaged

for a sufficient period in a position of important responsibility in Engineering, *or* (iii) have attained a position of eminence as a mechanical engineer.

Companions (C.I.Mech.E.) are persons who occupy distinguished positions in a profession, science or industry having interests in relation to Mechanical Engineering, or have rendered important services to Mechanical Engineering.

Associates (Assoc.I.Mech.E.) are persons who have not qualified for corporate membership, but who have reached the age of 30 and hold positions of responsibility related to Mechanical Engineering.

Associate Members (A.M.I.Mech.E.) are persons who have either (i) attained the age of 26 years and been adequately trained, had sufficient practical experience, and held a post of responsibility in Mechanical Engineering for a sufficient period. In addition they must have passed the Institution's examination or gained exemption from it; *or* (ii) attained the age of 33 years and had a good general and scientific training and passed prescribed parts of the examination or submitted a thesis on an approved subject; *or* (iii) attained the age of 30 years, had research or similar experience and attained a position of sufficient importance in Mechanical Engineering and acquired a high standard of knowledge in Mechanical Engineering or in a branch of science related to Mechanical Engineering, and obtained an honours degree, or its equivalent, in Mechanical Engineering.

Graduate Membership (G.I.Mech.E.) is open to persons not less than 21 years of age and not more than 30 years of age. They must be making satisfactory progress in the acquisition of qualifications for Associate Membership and have received adequate practical training as a mechanical engineer. They must also have passed or gained exemption from Parts I and II of the examination.

Students (S.I.Mech.E.) are persons who are not less than 16 years of age and not more than 25 years of age. They must be receiving adequate instruction in the theory of Mechanical Engineering or practical training as a mechanical engineer.

EXAMINATION

The Associateship Examination is set in three Parts: I, II and III.

Exemption from Part I is gained by holders of most degrees. College associateships and diplomas, H.N.C.'s, H.N.D.'s, Dip. Tech.'s in Mechanical Engineering and certain Royal Naval examinations also provide exemption. 'A' level passes provide partial exemption.

Exemption from Parts II and III is gained by all degrees in Mechanical, Aeronautical and Marine Engineering. Partial exemption is gained by other Engineering degrees.

H.N.C. and H.N.D. in mechanical engineering provide exemption on a subject-for-subject basis. Other H.N.C. and H.N.D.'s provide partial exemption. Certain Dip.Tech.'s and college diplomas provide partial or complete exemption.

Exemption from Part III only is provided by certain diplomas and degrees in Production Engineering and Management.

Exemption from Parts I, II and III is provided by many Dip.Tech.'s, degrees in Mechanical or Production Engineering and certain college associateships or diplomas. Some qualifications in Aeronautical Engineering also provide complete exemption from all three parts.

Full details of exempting qualifications may be obtained from the Institution.

Courses leading to the Institution's examination are conducted at Chesterfield College of Technology and at Kingston College of Technology.

UNIVERSITY DEGREES AND DIPLOMAS

(i) DEGREES

Honours degree courses are offered at the following universities. For details of higher and other degrees *see* the entries for the individual universities in Part 4. The course requirements all specify Mathematics and most specify or prefer Physics or Chemistry.

Aberdeen. B.Sc.(Eng.): 4 years. 2 'A' levels including Pure or Applied Mathematics.

Belfast. B.Sc.: 3 years. 'A' levels in Pure Mathematics, Applied Mathematics, Physics. Or 4 years. 'A' levels in Applied or Pure Mathematics, Physics.

Birmingham. B.Sc.: 3 years. 3 'A' levels including Physics.

Bristol. B.Sc.: 3 years. 'A' levels in Pure and Applied Mathematics, or in Physics and Mathematics.

Cambridge. B.A.: 3 years.

Durham. B.Sc. in Engineering Science: 3 years. 2 'A' levels.

Edinburgh. B.Sc.: 4 years. 'A' levels in Physics, Mathematics, Chemistry preferred.

Glasgow. B.Sc.: 4 years. 3 'A' levels including Pure and Applied Mathematics with Physics preferred.

Leeds. B.Sc.: 3 or 4 years. 2 'A' levels including Physics.

Leicester. B.Sc. in Engineering: 3 years. 2 'A' levels including Physics.

Liverpool. B.Eng.: 3 years. 3 'A' levels including Physics and Mathematics. Chemistry preferred as third subject.

London. B.Sc.(Eng.): 3 years at Q.M.C., Imperial, King's, University College, West Ham C.T., Woolwich Polytechnic. 2 'A' levels including Physics.

Manchester. B.Sc.: 3 years. 2 'A' levels including Physics.
B.Sc. and A.M.C.S.T.: 3 years. 2 'A' levels either in Pure Mathematics and Applied Mathematics, Physics and Mathematics or Pure and Applied Mathematics and Higher Mathematics.

Newcastle. B.Sc.: 3 years. 'A' levels in Physics, Pure Mathematics and Applied Mathematics.

Nottingham. B.Sc.: 3 years. 'A' levels in Physics and one other Mathematical Subject. Or 4 years. 2 'A' levels or approved O.N.C.

Oxford. B.A.: 3 years.

Sheffield. B.Eng.: 3 years. 'A' levels in Pure Mathematics, Applied Mathematics and Physics.

Southampton. B.Sc.(Eng.): 3 years. 'A' levels in Physics, Pure and Applied Mathematics, or approved O.N.C., O.N.D.

St. Andrews. B.Sc.: 4 years. 2 'A' levels including Physics.

Sussex. B.Sc.: 3 years. 2 'A' levels in Physics and a Mathematical subject.

Warwick. B.Sc. in Engineering Science: 3 years. 2 'A' levels including Pure Mathematics and Applied Mathematics or Physics, or Physics and Pure and Applied Mathematics (single subject).

Wales (Cardiff). B.Sc.: 3 years. 3 'A' levels including Physics. Or 4 years. 2 'A' levels including Physics.

Wales (Swansea). B.Sc.: 3 years. 3 'A' levels including Physics. Or 4 years. 4 'A' levels. Candidates with O.N.C., O.N.D., H.N.C., H.N.D. will also be accepted.

(ii) EXTERNAL DEGREES

Courses for **B.Sc.(Eng.) of London University** (except in cases indicated) are conducted at the following colleges:

City of Belfast College of Technology ((B.Sc., University of Belfast) 4 years sandwich); Bournemouth Municipal College of Technology and Commerce (3 years full-time); South-West Essex Technical College (3 years full-time); North Gloucestershire Technical College (3 years full-time); Hull College of Technology (3 years full-time); Medway College of Technology (3 years full-time);

The Polytechnic, Regent Street (3 years full-time); Luton College of Technology (4 years sandwich); Enfield College of Technology (4 years sandwich); Oxford College of Technology (3 years full-time); Paisley College of Technology (3 years full-time); Plymouth College of Technology (3 years full-time); Sunderland Technical College (3 years full-time, B.Sc.(Applied Science)—Newcastle B.Sc.(Eng.)); Kingston College of Technology (3 years full-time); Rugby College of Engineering Technology (5 years sandwich); The College, Swindon (3 years full-time); Robert Gordon's Technical College, Aberdeen (3 years full-time (B.Sc., Aberdeen)).

(iii) UNIVERSITY DIPLOMAS

University of Birmingham: Postgraduate Diploma in Thermodynamics and Related Studies. 1 year full-time.

University of London (Imperial College): Postgraduate Diplomas (D.I.C.) in various branches of Mechanical Engineering. 1-year courses.

(iv) DEGREES OF FORMER C.A.T.'S; DEGREES OF THE C.N.A.A.

The following colleges now offer courses leading to degrees of the new universities (some of the courses previously led to Dip.Tech.).

Birmingham C.A.T. B.Sc.: 3 or 4 years. 2 'A' levels including Physics.

Bradford I.T. B.Tech.: 4 years. 2 'A' levels including Pure and Applied Mathematics.

Bristol C.S.T. B.Sc.: 4 years. 2 'A' levels including Physics.

Battersea C.T. B.Sc.: 3 or 4 years. 3 'A' levels preferred, including Physics.

Brunel College. B.Tech.: 4 years. 2 'A' levels including Physics.

Heriot-Watt College. B.Sc.: 4 years. 2 'A' levels including Pure and Applied Mathematics.

Loughborough C.T. B.Tech.: 4 years. 2 'A' levels including Physics.

Northampton C.A.T. B.Sc.: 3 or 4½ years sandwich. 2 'A' levels including Physics.

Salford Royal C.A.T. B.Sc.: 4 years. 2 'A' levels.

Strathclyde. B.Sc.: 4 years. 2 'A' levels including Pure and Applied Mathematics.

Welsh C.A.T. B.Eng.: 3 years. 2 'A' levels including Physics; or **B.Eng.(Tech.):** 4 years.

At the following colleges former Dip.Tech.'s lead to **honours degrees of the C.N.A.A.** (all sandwich courses).

Brighton C.T.; Constantine C.T.; Hatfield C.T.; Hendon C.T.; Huddersfield C.T.; Lanchester C.T.; Nottingham Regional C.T.; Portsmouth C.T.; Rugby College of Engineering Technology; Rutherford C.T.; Staffordshire C.T.; Wolverhampton and Staffordshire C.T.; Woolwich C.T.; Dundee Technical College.

NATIONAL CERTIFICATES AND DIPLOMAS

National Certificates are awarded in Mechanical Engineering after courses of part-time study.

The Ordinary National Certificate (O.N.C.) course is normally open to students who have had full-time education up to the age of 16 with appropriate G.C.E. or other passes. O.N.C. is a two-year course.

Higher National Certificate (H.N.C.) is awarded at the end of a further two-year course. It is also open to candidates with 5 G.C.E. passes including Physics or Mathematics at 'A' level.

National Diplomas are awarded on completion of full-time sandwich courses.

Ordinary National Diploma (O.N.D.) courses are normally of two years' duration and are open to candidates of at least 16 years of age with G.C.E. 'O' level passes in Mathematics, a suitable science and two other subjects, or the equivalent.

Higher National Diploma (H.N.D.) courses are normally of three years' duration and are open to students of not less than 18 years with an 'A' level pass in Mathematics or Physics and 4 other 'O' level passes. H.N.D. courses in Mechanical Engineering (mostly 3 years sandwich) are conducted at the following colleges:

Barrow-in-Furness Central College of Further Education; Aston Technical College; South Birmingham Technical College; Bolton Technical College; Bournemouth Municipal College of Technology and Commerce; Bristol Technical College; High Wycombe College of Further Education; Slough College; Cornwall Technical College; Lanchester College of Technology; Croydon Technical College; Workington College of Further Education; Darlington College of Further Education; Derby and District College of Technology; Chesterfield College of Technology; North-East Essex Technical College; South-East Essex College of Technology; South-West Essex Technical College; North Gloucestershire Technical College; Farnborough Technical College; Hatfield College of Technology; Letchworth College of Technology; Watford College of Technology; Huddersfield College of Technology; Hull College of Technology; Medway College of Technology; Leeds College of Technology; Leicester College of Technology; Liverpool College of Technology; Borough Polytechnic; South-East London Technical College; Luton College of Technology; Constantine College of Technology; Enfield College of Technology; Hendon College of Technology;

Southall Technical College; Twickenham College of Technology (Control Engineering); John Dalton College, Manchester; Rutherford College of Technology; Nottingham and District Technical College; Oldham Municipal Technical College; Oxford College of Technology; Peterborough Technical College; Plymouth College of Technology; Portsmouth College of Technology; The Harris College of Further Education; Reading College of Technology; Rotherham College of Technology; St. Helens Technical College; Salford Technical College; Shrewsbury Technical College; Chance Technical College; North Staffordshire College of Technology; Sunderland Technical College; Kingston College of Technology, Surrey; Rugby College of Engineering Technology; The College, Swindon; Wolverhampton and Staffordshire College of Technology; Bromsgrove College of Further Education; Denbighshire Technical College; Glamorgan College of Technology; Newport and Monmouthshire College of Technology; Robert Gordon's Technical College, Aberdeen; Paisley College of Technology.

COLLEGE DIPLOMAS AND ASSOCIATESHIPS

Courses are offered at the following colleges:

<u>College</u>	<u>Duration</u>	<u>Award</u>
Bolton Technical College	2 years full-time	College Diploma in Foundry Work
	2 years full-time	College Diploma in Automobile Engineering
Brighton College of Technology	3 years full-time	College Diploma
Derby and District College of Technology	5 years sandwich	College Diploma for British Railways
Dundee Technical College	4 years full-time	College Associateship
Huddersfield College of Technology	4 years sandwich	ditto
Leeds College of Technology	24 weeks	College Diploma
Borough Polytechnic	3 years full-time	ditto
The Polytechnic, Regent Street	3 years full-time	ditto
Luton College of Technology	4 years sandwich	ditto
Manchester College of Science and Technology	2 years full-time	College Diploma in Machine Tool Design
Hendon College of Technology	3½ years sandwich	College Diploma
Twickenham College of Technology	4 years sandwich	ditto
Nottingham and District Technical College	4 years sandwich	ditto
Oxford College of Technology	4 years sandwich	College Diploma in Mechanical/Automobile Engineering
Rotherham College of Technology	1 year full-time	College Associateship
Rugby College of Engineering Technology	4 years sandwich	College Diploma
Staffordshire College of Technology	1 year full-time	ditto
Kingston College of Technology	3 years sandwich	ditto
West Ham College of Technology	3 years full-time	ditto
Glamorgan College of Technology	4 years sandwich	ditto
Robert Gordon's Technical College	3 years full-time	College Associateship

CITY AND GUILDS OF LONDON INSTITUTE EXAMINATIONS

The C.G.L.I. conducts examinations in the following subjects:

Mechanical Engineering Craft Practice (Subject No. 193)

Mechanical Engineering Technician's Course (Subject No. 293). Parts I, II and also Full Technological Certificate examinations in a range of subjects are set.

Ordinary and Higher Certificates in Mechanical Engineering (Subject Nos. 302, 303) for overseas students only.

Ordinary Technician Diploma in Mechanical and Electrical Engineering (Subject No. 327) for overseas students only.

CERTIFICATES OF THE REGIONAL EXAMINING UNIONS

The following Unions hold mechanical engineering examinations:

Union of Lancashire and Cheshire Institutes; Northern Counties Technical Examinations Council; Union of Educational Institutions; East Midland Educational Union; Yorkshire Council for Further Education; and Welsh Joint Education Committee.

The examinations are:

National Certificate in Mechanical Engineering; General Courses in Engineering; Mechanical Engineering Technician's Course; Mechanical Engineering Craft Practice Course.

MINING ENGINEERING

The Institution of Mining Engineers

3, Grosvenor Crescent, London, S.W.1

Members (M.I.Min.E.) must be at least 30 years of age, and must have the technical education and training required of Associate Members. In addition, they must have at least five years' responsible experience as defined in one of the following groups:

Group A. Mining Engineers. Manager of a colliery of minimum output 100,000 t.p.a. or a comparable or higher executive post or H.M. Inspector of Mines and Quarries. Applications from senior mining engineers with special responsibilities other than as a colliery manager will be considered.

Group B. Mining Surveyors. Chief Surveyor or Chief Planning Engineer to a colliery or group of collieries with minimum output of 500,000 t.p.a.

Group C. Engineers. Chief Civil, Chief Electrical or Chief Mechanical Engineer to a colliery or group of collieries with minimum output of 500,000 t.p.a.

Group D. Other Professions. Professor of Mining at a recognised university or Head of Mining at an approved Technical College; Reader or Senior Lecturer in Mining at a recognised university if 35 years of age or over; Lecturer at such a university or Senior Lecturer at a major Technical College if 35 years of age or over and able to show suitable evidence of academic publications or professional experience. Research workers and members of certain professions may be eligible if they hold an Honours or higher degree, or corporate membership of an appropriate body or have passed the Associate Membership examination, provided that they have held a post of sufficient responsibility and authority for not less than five years and that their work is of value to the mining industry.

Associate Members (A.M.I.Min.E.) must be at least 23 years of age and be engaged in the mining industry or an allied industry. Four groups of Associate Membership are recognised as follows:

Group A. Mining Engineers. Candidates must have passed or gained exemption from the Associate Membership examination or have undergone an approved course of practical training and experience in mining of coal or other stratified deposits of not less than five years, or for those holding an approved degree or diploma, three years.

Group B. Mining Surveyors. Candidates must possess a statutory Certificate as a mine surveyor, have satisfied the requirements for corporate membership of the mining section of the R.I.C.S. and have undergone five years' approved practical training in mine surveying.

Group C. Engineers. Candidates must have satisfied the requirements for corporate membership of the Institutions of Civil, Mechanical or Electrical Engineers and have undergone an approved course of practical training for not less than five years, which in the case of electrical or mechanical engineering shall be training in colliery workshops and underground.

Group D. Other Professions

Educationists must comply with the requirements for one of the three Groups A, B or C above and be engaged in teaching one or more of the subjects of the Associate Membership examination.

Research Workers must have passed the Associate Membership examination, have had at least five years' training and experience in coal mining or other occupations included in the syllabus for the examination and be engaged in research at an approved university or other research centre in one or more of the subjects of the examination.

Chemists, Physicists, Chemical Engineers, Geologists and members of the legal or medical professions must have satisfied the conditions for admission to corporate membership of the institution appropriate to their profession, have had at least five years' training and experience in that profession and be engaged in work connected with mining.

Associates must be at least 25 years of age and be engaged in Mining Engineering or be qualified to concur with mining engineers in the advancement of the knowledge of Mining Engineering.

Students must not be more than 25 years of age, and training for the profession of mining engineering or an ancillary profession.

EXAMINATION

The Associate Membership Examination is conducted in two stages:

Stage I: Geology and Mine Surveying; Applied Mechanics and Electricity.

Stage II: Principles of Mining I; Principles of Mining II; Organisation and Management.

Exemption is granted from the whole examination to full members of the Institution of Mining and Metallurgy, and Associate Members are granted complete exemption, except for the Organisation and Management papers. Complete exemption, except for the Organisation and Management papers, is granted to holders of: Approved mining degrees of British and certain overseas universities; Diplomas in Mining of approved colleges; First Class Associateship of the Camborne School of Metalliferous Mining; Associateship of Heriot-Watt College in Mining; University of Leeds Diploma in Mining; Royal School of Mines Associateship in Mining; R.C.S.T., Glasgow, Associateship or Diploma in Mining Engineering; Sheffield University Diploma in Mining; U.C. of South Wales and Monmouthshire Diploma in Metalliferous

Mining; Wigan and District Mining and Technical College Diploma in Mining; holders of old-style First Class Certificate of Competency in specified approved managerial position for at least five years. Holders of degrees in electrical or mechanical engineering of a British university or of the B.I.M. Diploma in Management Studies are exempted from certain papers.

The Institution of Mining and Metallurgy

44, Portland Place, London, W.1

Members (M.I.M.M.) must be at least 30 years of age and shall have been an Associate Member; at least five years' experience in responsible charge of important mining or metallurgical operations or as a consultant or adviser in Mining Metallurgy or Geology is required.

Honorary Members (Hon.M.I.M.M.) are persons of distinction in the Mining or Metallurgical industries, the public service, science or the arts.

Associate Members (A.M.I.M.M.) must be at least 25 years of age and have had a period of at least seven years' training and professional experience, including two years' responsible work in Mining, Metallurgy or Geology. They must also have either passed the Associate Membership examination or obtained exemption from it.

Student Members (Student I.M.M.) must be more than 18 but not greater than 28 years of age, and be being educated or trained for entry into the profession of Mining, Metallurgy or Geology.

Affiliates (Affiliate I.M.M.) must be more than 25 years of age and have been engaged in mining or metallurgy or in scientific or technical work in connection with Mining or Metallurgy for at least six years.

EXAMINATION

The examination is set in three Sections, A, B and C. Sections A and B consist of written papers and Section C may require submission of a dissertation or thesis on some part of the candidate's professional work.

Exemption may be granted as follows:

Section A. G.C.E. examinations at 'A' level in required subjects; O.N.C. in Mining or Metallurgy; C.G.L.I. Intermediate Grouped Course Certificate in Metallurgy; approved intermediate examination at university, school of mining or technical college.

Section B. Partial exemption may be granted on a subject-for-subject basis to holders of the following: H.N.C. (of satisfactory exemption standard) in Mining or Metallurgy; Grouped Course Certificate in Metallurgy, C. and G. of London Institute; Full Technological Certificate of C. and G. of London Institute in Mine Surveying; National Diploma in Mining; First Class Colliery Manager's Certificate of Competency; Licentiatehip of the Institution of Metallurgists.

Complete exemption may be granted to: Associate or graduate members of appropriate professional institutions; graduates in appropriate subjects of approved universities; associates of approved schools of mines or approved technical colleges, and holders of a South African Metalliferous Mine Manager's Certificate; Full Technological Certificate in Metallurgy of City and Guilds of London Institute.

The Association of Mining Electrical and Mechanical Engineers

62, Talbot Road, Manchester, 16

Fellows must have been Members for at least 10 years and either have distinguished themselves by scientific attainment or made or rendered important contributions or valuable services to the Association. Or, if non-Members, be intimately concerned with Electrical or Mechanical Engineering applied to Mining and either have distinguished themselves by literary or scientific attainment or have made or rendered important communications or valuable services to Mining.

Members must be at least 25 years of age and have obtained a specified certificate of the Association or passed an approved examination in Mining Electrical or Mechanical Engineering Technology. In addition, they must satisfy one of the following: candidates must be regularly trained and educated as mining electrical or mechanical engineers, electricians or mechanics according to the usual routine of pupilage, and have had at least four years' employment in some responsible position *or*, if they have not undergone the routine of pupilage, they must have had at least five years' appropriate responsible experience *or*, if regularly trained as electrical or mechanical engineers, must have practised or been employed in some branch of Engineering applied to Mining, *or* must be associated with Electrical or Mechanical

Engineering as applied to Mining so that admission would promote the objects of the Association.

Associate Members must be at least 23 years of age and educated and trained in Mechanical or Electrical Engineering as applied to Mining and been appropriately employed for at least two years, *or* must be Students or Graduates of the Association with at least two years' approved experience *or*, if they have not undergone the usual routine of pupilage, must have had at least three years' approved experience.

In addition, they must obtain an appropriate Certificate of the Association or have passed an approved examination in Electrical or Mechanical Engineering Technology.

Associates must be at least 21 years of age, either be associated with Electrical or Mechanical Engineering as applied to Mining or have two years' appropriate approved experience, such that admission would promote the objects of the Association.

Graduates must be at least 21 years of age, and hold the appropriate Certificate of the Association or passed an approved examination in Mining Electrical or Mechanical Engineering. In addition, they must have been regularly trained and educated in Electrical or Mechanical Engineering as applied to Mining, be engaged in or associated with some branch of Electrical or Mechanical Engineering applied to Mining.

Students must be at least 16 years of age and be serving an apprenticeship or pupilage in Electrical or Mechanical Engineering as applied to Mining, or be studying Electrical and/or Mechanical Engineering as applied to Mining at an approved university, technical institution, or school.

AWARDS

The Association Certificates confer exemption from the written examinations for the Mining Qualifications Board (M.Q.B.) Certificates of Competency.

The certificates are classified: Honours, 1st Class and 2nd Class, in either the mechanical or electrical section. Before presenting themselves for the Honours examinations the candidate must hold one of: 1st Class certificate of the Association; C.G.L.I. Colliery Mechanic's or Electrician's Certificate (Advanced); O.N.C. in Electrical or Mechanical Engineering and an Ordinary Certificate in Mining.

UNIVERSITY DEGREES AND DIPLOMAS

(i) DEGREES

Honours degree courses are offered at the universities listed,

with course requirements and duration shown. For details of higher and other degrees refer to entries under individual universities in Part 4.

Birmingham. B.Sc. in Minerals Engineering: 3 years. 3 'A' level passes including Physics and Chemistry.

Edinburgh. B.Sc. in Mining: 4 years. 'A' level passes in Physics, Mathematics and Chemistry.

Heriot-Watt College. B.Sc. in Mining Engineering: 4 years sandwich. 2 'A' level passes including Pure and Applied Mathematics and Physics or Chemistry.

Leeds. B.Sc. in Mining: 3 or 4 years. 2 or 3 'A' level passes including Physics. **B.Sc. in Applied Mineral Science:** 3 or 4 years. 2 or 3 'A' level passes including Chemistry.

London (Imperial College). B.Sc.(Eng.) in Mining: 3 years. 2 'A' level passes including Physics. **B.Sc.(Eng.) in Mineral Technology:** 3 years. 3 'A' level passes including Physics and Chemistry.

Newcastle. B.Sc. in Mining Engineering: 3 or 4 years. 3 or 2 'A' level passes in Physics and Pure and Applied Mathematics.

Nottingham. B.Sc. in Mining Engineering: 3 or 4 years. 2 'A' levels (4-year course) or 3 'A' levels including Pure and Applied Mathematics and Physics.

Strathclyde. B.Sc. in Mining Engineering: 4 years sandwich. 2 'A' level passes including Pure and Applied Mathematics.

Wales (Cardiff). B.Sc. in Mining: 3 years. 'A' level passes in Physics, Pure Mathematics, Applied Mathematics or Physics, Chemistry, Mathematics, or H.N.C. or H.N.D. in approved subject.

(ii) DIPLOMAS AND CERTIFICATES

University of Birmingham: Postgraduate Diploma in Mining. 1-year course.

University of Leeds: Postgraduate Diploma in Mineral Dressing and Coal Preparation. 1-year course. Diploma in Mining Engineering. Minimum 2-year course.

University of London. Associateship of the Royal School of Mines (A.R.S.M.) in Mining Geology, Mining, Mineral Technology (combined with honours degree course).

Diploma of Imperial College (D.I.C.) in Mining: 1-year course. Postgraduate.

University of Sheffield: Postgraduate Diploma in Mining. 1-year full-time or equivalent part-time.

University of Wales (Cardiff): Diploma in Metalliferous Mining. 3 years full-time.

NATIONAL CERTIFICATES AND DIPLOMAS

Ordinary National Certificate (O.N.C.) in Mining is taken after a 2-year part-time course by students with 'O' level passes including Mathematics and a science, or a 3-year part-time course by other students. This is followed by a 2-year part-time course for the **Higher National Certificate (H.N.C.)** (for holders of O.N.C.).

The National Diploma in Mining is obtained by 1 year's full-time study by holders of the H.N.C., or 3-year sandwich course by holders of the O.N.C.

Courses are conducted for the National Diploma at the following colleges:

Ashington County Technical College, Northumberland (1 year full-time); Barnsley College of Technology (1 year full-time); Doncaster Technical College (1 year full-time or 3 years sandwich); Heriot-Watt College (1 year full-time); Nottingham and District Technical College (3 years sandwich); North Staffordshire College of Technology (3 years sandwich); Sunderland Technical College (1 year full-time or 3 years sandwich); West Notts. Technical College, Mansfield (1 year full-time); Wigan and District Mining and Technical College (3 years sandwich); Glamorgan College of Technology (1 year full-time or 3 years sandwich).

COLLEGE ASSOCIATESHIP

The Camborne School of Metalliferous Mining, Camborne, Cornwall, awards an Associateship after a three-year course of theoretical and practical instruction in Mining, Mineral Dressing, Surveying, Geology, Metallurgy and Geochemistry.

CITY AND GUILDS OF LONDON INSTITUTE EXAMINATIONS

The C.G.L.I. conducts examinations for the following:

Mining Advanced Certificate (Subject No. 191). Candidates must already hold the Coal Mining Certificate (Subject No. 25) or another acceptable qualification.

Coal Mining Certificate (Subject No. 25).

Colliery Electrician's Advanced Certificate (Subject No. 190). Candidates must already hold the Colliery Electrician's Certificate (Subject No. 27) or another acceptable qualification.

Colliery Electrician's Certificate (Subject No. 27).

Colliery Mechanic's Advanced Certificate (Subject No. 189).
Candidates must already hold the Colliery Mechanic's Certificate (Subject No. 26) or another acceptable qualification.

Colliery Mechanic's Certificate (Subject No. 26).

Coal Preparation (Subject No. 199).

EXAMINATIONS OF THE REGIONAL EXAMINING UNIONS

(i) UNION OF LANCASHIRE AND CHESHIRE INSTITUTES

The Union conducts examinations for:

O.N.C. and H.N.C. in Coal Mining; General Course in Mining; Colliery Craft Apprentices; Advanced General Mining Certificate; Colliery Mechanic's Advanced Certificate; Colliery Electrician's Advanced Certificate; Colliery Deputies and Shotfirers.

(ii) EAST MIDLAND EDUCATIONAL UNION

The Union conducts the following courses:

General Course in Mining; O.N.C. in Mining; Advanced Course in Mining; Advanced Course for Surveyors; Craft Certificate in Mining.

(iii) NORTHERN COUNTIES TECHNICAL EXAMINATIONS COUNCIL

The Council conducts the following courses:

O.N.C. in Mining; National Certificate Course in Mining; Mining Craft Course; General Course in Mining.

(iv) WELSH JOINT EDUCATION COMMITTEE

The Committee conducts the following courses:

General Course in Mining; Senior Course in Mining; Mining Craft Certificate; H.N.C., O.N.C. in Mining; H.N.C. in Mining Surveying.

(v) COUNCIL OF TECHNICAL EXAMINING BODIES

The Council conducts the following courses:

General Course in Mining; O.N.C., H.N.C. in Mining and in Mining Surveying.

OTHER QUALIFICATIONS

Certificate of Competency of the Mining Qualifications Board. The 1st Class certificate is the statutory qualification for appointment as a colliery manager. The M.Q.B. certificates are

awarded as follows: Electrical or Mechanical Engineers; Electricians or Mechanics Class I; Electricians or Mechanics Class II. The academic requirements for the 1st Class certificates are fulfilled by holders of degrees or National Diplomas in Mining. Exemption from the three classes of certificates is respectively afforded by the Honours, 1st Class and 2nd Class certificates of the Association of Mining Electrical and Mechanical Engineers.

MUNICIPAL ENGINEERING

The Institution of Municipal Engineers

25, Eccleston Square, London, S.W.1

Members (M.I.Mun.E.) must be at least 30 years of age and hold, in a public or local authority, an appointment that falls into one of the following categories: (a) engineer or surveyor to a local authority, being chief officer of his department for at least one year. (b) Deputy to the chief officer for at least two years, having control of a technical staff including not less than two corporate members of the Institution or persons of equivalent professional status. (c) Principal or chief technical assistant ranking next below deputy to the chief officer for at least three years, having control of at least five corporate members of the Institution or persons of equivalent professional status. (d) Divisional or district engineer or surveyor having charge of works in a main division of a county or county borough for at least three years. (e) Other technical officers whose duties entail experience and responsibility of approved level who have held the appointment for at least two years. In addition, candidates must have passed the Institution's examination in full or such parts from which they have not been granted exemption. Engineers over 45 years of age of eminence and approved professional qualifications may be admitted by means of a modified examination or thesis.

Associate Members (A.M.I.Mun.E.) must be at least 23 years of age and hold, in the service of a local or public authority, an appointment as engineering or surveying assistant, resident engineer or technical officer, on engineering or surveying works. In addition, they must pass the Institution's examination or such parts from which they have not been granted an exemption.

Students must be at least 17 years of age and have passed the Engineering Institutions' Common Preliminary Examination or have an exempting qualification.

EXAMINATION

The Institution's Examination is set in three Parts.

Part I is in two sections: Section A is an examination common to all institutions participating in the Engineering Institutions' Part I Examination; Section B is common to the Institutions of Municipal and Civil Engineers.

Part II tests the candidate's technological knowledge of several subjects.

Part III is a professional examination taken after practical training.

Exemption from Part I is gained by holders of degrees of British and certain overseas universities in Civil or Municipal Engineering; persons who have passed Part I of the Institution of Civil Engineer's examination; Dip.Tech. in Civil Engineering; H.N.C. in Civil Engineering on a subject-for-subject basis.

Exemption from Part II is gained by holders of degrees in Civil or Municipal Engineering of British and certain overseas universities; Dip.Tech.(Engineering); persons who have passed Parts I and II of the I.C.E. examination; holders of the Wolverhampton and Staffordshire College of Technology Diploma in Municipal Engineering; holders of the Birmingham C.A.T. Associateship in Municipal Engineering.

Total exemption is also gained by holders of many college diplomas and associateships in Civil Engineering, Town Planning, and Structural Engineering.

Partial exemption is gained by holders of other specified degrees, diplomas and associateships. Certain combinations of subjects passed in H.N.C. and O.N.C. give partial exemption in Parts I and II. There is no exemption from Part III of the examination.

Four-year sandwich courses leading to the Institution's examination are conducted at the Lanchester College of Technology and at the South-West Essex Technical College.

Other examinations. The Institution also conducts examinations for the following examinations:

- The Diploma in Organisation and Administration
- The Diploma in Town Planning
- The Diploma in Traffic Engineering
- The Building Inspector's Certificate.

UNIVERSITY DIPLOMA

University of Newcastle: Postgraduate Diploma in Public Health and Municipal Engineering. 1-year course.

COLLEGE DIPLOMAS AND ASSOCIATESHIPS

Birmingham C.A.T.: Associateship in Municipal Engineering. 4 years sandwich.

Wolverhampton and Staffordshire C.T.: Diploma in Municipal Engineering.

NUCLEAR ENGINEERING

(including Radiation Safety)

UNIVERSITY DEGREE AND DIPLOMAS

(i) DEGREE

London. B.Sc.(Eng.) in Nuclear Engineering: 3-year course. 2 'A' level passes, including Physics, required. (Queen Mary College).

(ii) UNIVERSITY DIPLOMAS

Bradford I.T.: Postgraduate Diploma in Nuclear Reactor Technology.

University of London (Queen Mary College): 1-year postgraduate Diploma in Nuclear Engineering, for honours graduates in science, mathematics or engineering.

Imperial College Diploma (D.I.C.): 1-year course in Nuclear Technology, Mechanical Engineering (Nuclear Power).

University of Strathclyde: 1-year postgraduate Diploma in Nuclear Engineering.

CITY AND GUILDS OF LONDON INSTITUTE
EXAMINATION

The C.G.L.I. conducts an examination in Radiation Safety Practice (Subject No. 290).

PLANT ENGINEERING

The Institution of Plant Engineers

2, Grosvenor Gardens, London, S.W.1

(i) CORPORATE MEMBERS

Fellowship (F.I.Plant E.) is the senior grade of membership of the Institution.

Members (M.I.Plant E.) must be at least 30 years of age and have held a position of superior responsibility (e.g. in senior management) for at least two years.

Associate Members (A.M.I.Plant E.) may qualify in one of three different ways: (a) they must be at least 25 years of age and have had at least two years' experience in positions of adequate responsibility in plant engineering. In addition they must possess one of the following qualifications:

Degrees in Engineering of British or specified overseas universities. Other university degrees will be considered on their merits.

Diplomas in Technology (Engineering); Diplomas of Faraday House; Diplomas of Associateship in engineering subjects of Colleges of Technology in the United Kingdom; the Heating and Ventilating Diploma of the National College of Heating, Ventilating, Refrigeration and Fan Engineering. The Joint Part I Examination together with the Part II Examination for Graduate membership of the Institutions of Civil Engineers, Mechanical Engineers, Electrical Engineers, Chemical Engineers, Production Engineers, The Royal Aeronautical Society.

The examinations qualifying for Associate membership of and conducted by the Institutions of Gas Engineers, Heating and Ventilating Engineers, Mining Engineers, Structural Engineers.

The First Class Certificate of Competency for Engineers in the Mercantile Marine.

H.N.C. or H.N.D. in engineering.

Engineering Cadetship Diploma.

Any of the following C.G.L.I. Certificates (F.T.C. or Final)

Subject Nos. 293, 187, 52, 60, and any three of Subject Nos. 5, 7, 49, 57, 63, 73, 77, 91, 186, 194.

The following examinations of the Royal Navy: Royal Naval College, Greenwich—Professional Certificate of Constructors; Royal Naval Engineering College, Keyham—Final examination which qualifies for Lieut.(E); Royal Navy Engineering College, Manadon—Final examination which qualifies for Lieut.(E).

Examinations of the Royal Military College of Science qualifying for 'p.t.s.c.'

The Testamur of the Institution of Municipal and County Engineers is accepted in certain circumstances and applicants for exemption should submit full details of subjects passed.

(b) Submission of a thesis instead of the academic qualifications listed above.

(c) For candidates over 28 years of age, at least 10 years' approved practical experience in plant engineering of which at least five years have been spent in positions of adequate responsibility.

(ii) NON-CORPORATE MEMBERS

Graduates (Grad.I.Plant E.) must be at least 21 but not more than 30 years of age. They must also possess one of the following qualifications:

O.N.C. or O.N.D. in engineering and be pursuing a course leading to an H.N.C. or to C.G.L.I. in Plant Engineering; possess one of the C.G.L.I. certificates 293, 57 or 52 and be taking certain specified advanced courses; Certificate (4-year course) of Royal Dockyard Technical Schools.

Students must be at least 16 but not more than 25 years of age and be taking a course which trains them in the fundamentals of Engineering.

Associates (A.I.Plant E.) are those who, although not actively engaged in Plant Engineering, are in work allied to it and have qualifications or status equivalent to those possessed by corporate members.

CITY AND GUILDS OF LONDON INSTITUTE EXAMINATION

The C.G.L.I. conducts an examination in plant engineering (Subject No. 187) in three groups: (A) Mechanical Power Distribution; (B) Mechanical Energy Generation; (C) Electrical Energy Generation and Distribution.

PRODUCTION ENGINEERING

The Institution of Production Engineers

10, Chesterfield Street, London, W.1

Members (M.I.Prod.E.) must be at least 30 years of age and either be Associate Members or possess the qualifications for Associate Membership and have been engaged for a sufficient period in an important position of responsibility in Production Engineering.

Associate Members (A.M.I.Prod.E.) must be at least 28 years of age and must have received a good general education and adequate practical training in Production Engineering. In addition, they must have had at least four years' experience in production engineering and have held a position of responsibility for an adequate period. They must also have passed the Associate Membership examination or gained exemption from it (Parts I, II, III).

Associates (A.I.Prod.E.) are either persons of at least 35 years who do not possess the necessary qualifications for corporate membership, but have for five years held positions of executive responsibility or control of Production Engineering, or of at least 28 years who possess qualifications of comparable standard in professions related to Production Engineering and have held positions of managerial responsibility for, or control of, functions involving Production Engineering.

Graduates (Grad.I.Prod.E.) must be at least 21 years of age and have received or been receiving adequate practical training in Production Engineering and passed Parts I and II of the Institution's examination or gained exemption from it.

Students must be at least 18 but not more than 28 years of age and have received a good general education and be following a course of approved practical training and technical education.

EXAMINATION

The Institution's Examination consists of Parts Ia, Ib, II and III.

Part Ia is intended to test the candidate's knowledge of Engineering Science.

Part Ib has the subjects of Production Processes and Chemistry as alternatives.

Exemption from Part I is gained by appropriate passes on a subject-for-subject basis at G.C.E. 'A' level.

Part II covers at a more advanced level engineering science and also includes papers on specialised technologies and management subjects.

Complete exemption from Parts I and II is granted to holders of specified Higher National or College diplomas in Production Engineering or Mechanical Engineering with production subjects. Other H.N.D. or H.N.C. awards will gain exemption on a subject-for-subject basis, and specific degrees in various branches of Engineering will gain exemption.

Partial exemption is also provided by specified Dip.Tech.'s

and degrees in Engineering, Metallurgy, Applied Chemistry, Applied Physics and Textiles.

Part III covers various aspects of management. Complete exemption is granted to holders of certain specified degrees or diplomas in Production Engineering. Exemption from Part III is also gained by various other specified qualifications in production engineering, industrial engineering, business and industrial management.

Note. Many of the exempting qualifications are those granted by overseas institutions.

A 4-year sandwich course leading to the Institution's examination is offered at Willesden Technical College.

UNIVERSITY DEGREES AND DIPLOMAS

(i) UNIVERSITY DEGREES

Honours degree courses are offered at the universities listed below. For details of higher and other degrees, refer to entries for the individual universities in Part 4. 'A' level passes specified in course requirements are invariably in Mathematics, Physics or Chemistry.

Birmingham. B.Sc.: 3 years. 3 'A' levels including Physics.

Nottingham. B.Sc.: 3 years. 'A' levels in Pure Mathematics, Applied Mathematics and Physics or H.N.C. of specified standard. Or 4 years. 2 'A' levels or approved O.N.C.

Wales (Swansea). B.Sc. in Industrial Engineering: 3 years. 3 'A' levels including Physics. Or 4 years. 2 'A' levels, approved H.N.C. or O.N.D.

(ii) UNIVERSITY DIPLOMAS AND CERTIFICATES

University of Birmingham: Postgraduate Diploma in Engineering Production and Management. 1 year full-time.

University of London (Imperial College): Postgraduate Diploma in Production Engineering. 1 year full-time.

University of Manchester (Faculty of Technology): College Diploma in Production Engineering. 1 year full-time. College Diploma in Production Engineering (Postgraduate). 1 year full-time.

University of Newcastle: Postgraduate Certificate in Production Engineering. 1 year full-time.

(iii) DEGREES OF FORMER C.A.T.'S, DEGREES OF THE C.N.A.A.

The following colleges now offer courses leading to degrees of the

new universities (some of these previously led to the Dip.Tech.).

Birmingham C.A.T. B.Sc.: 3 or 4 years. 2 'A' levels including Physics.

Bristol C.S.T. B.Sc.: 4 years. 2 'A' levels including Physics.

Brunel College. B.Tech. in Production Technology: 4 years. 2 'A' levels.

Loughborough C.T. B.Tech.: 4 years. 2 'A' levels including Physics.

Northampton C.A.T. B.Sc.: 4½ years sandwich. 2 'A' levels including Physics.

Salford Royal C.A.T. B.Sc. (including Production Engineering): 4 years. 2 'A' levels.

Welsb C.A.T. B.Eng.(Tech.): 4 years. 2 'A' levels including Physics.

At the following colleges sandwich courses (formerly for Dip. Tech.) now lead to **honours degrees of the C.N.A.A.:**

Lanchester C.T.; Dundee Technical College; Enfield C.T.

NATIONAL CERTIFICATES AND DIPLOMAS

National Certificates are awarded after courses of part-time study.

Ordinary National Certificate (O.N.C.) courses are normally open to students who have had full-time education up to the age of 16, with appropriate G.C.E. or other passes. O.N.C. is a 2-year course.

Higher National Certificate (H.N.C.) is awarded at the end of a further 2-year course, and is also open to candidates with 5 G.C.E. passes including one at 'A' level in either Physics or Mathematics (both being studied at 'A' level standard).

National Diplomas are awarded on completion of full-time or sandwich courses.

Ordinary National Diploma (O.N.D.) courses are normally of 2 years' duration and are open to candidates of at least 16 years with G.C.E. 'O' level passes in Mathematics, a suitable science subject and 2 other subjects or the equivalent.

Higher National Diploma (H.N.D.) courses are normally of 3 years' duration and are open to students of not less than 18 years of age with an 'A' level pass in Mathematics or Physics and 4 other G.C.E. passes.

H.N.D. courses in Production Engineering are conducted at the following colleges:

Lanchester College of Technology; North-East Essex Technical College; South-East Essex College of Technology; Gateshead Technical College; North Gloucestershire Technical College; Hatfield College of Technology; Accrington College of Further Education; Leicester College of Technology; Borough Polytechnic; Enfield College of Technology; Willesden Technical College; Nottingham and District Technical College; Newport and Monmouthshire College of Technology; Rugby College of Engineering Technology; Sheffield College of Technology; Kingston-upon-Thames College of Technology; Paisley College of Technology; Southampton College of Technology.

COLLEGE DIPLOMA AND ASSOCIATESHIP

Nottingham and District Technical College: College Diploma. 4-year sandwich course.

Dundee Technical College: College Associateship.

CITY AND GUILDS OF LONDON INSTITUTE EXAMINATIONS

The C.G.L.I. conducts examinations in Subject No. 293 (Mechanical Engineering Technical Courses) for the Full Technological Certificate in Production Topics.

See also Mechanical Engineering (page 685).

PUBLIC HEALTH ENGINEERING

The Institution of Public Health Engineers

12, Eccleston Square, Westminster, London, S.W.1

Fellows, Members and Associate Members are entitled to describe themselves as 'Incorporated Public Health Engineers'.

Fellows (F.I.P.H.E.) must be at least 36 years of age and have been Members for at least two years, and must be, in the opinion of the Council, of outstanding merit in the profession.

Members (M.I.P.H.E.) must be at least 35 years of age, or, if they have passed the Associate Membership examination, at least 30 years of age, have received a good education and be trained

public health engineers. In addition, they must have had at least five years' approved responsible experience.

Associate Members (A.M.I.P.H.E.) must be at least 21 years of age and received a good education and passed the Associate Membership examination or gained exemption from it. They must also have received regular training as a public health engineer, and have been engaged for at least two years in a position satisfactory to the Council of the Institution, in Public Health Engineering.

Honorary Fellows (Hon.F.I.P.H.E.) are persons distinguished for their service to public health.

Associates (A.I.P.H.E.) must be at least 25 years of age and received a good education. They must be engaged in work allied to Public Health Engineering (but not in practice as a public health engineer), or be able to promote the objects of the Institution.

Students (Stud.I.P.H.E.) must be at least 16 but not more than 25 years of age and have passed an approved preliminary qualifying examination. They must also be engaged in Public Health Engineering work or be articled to a public health engineer or be engaged on a recognised course of study leading to a qualification in Public Health Engineering.

EXAMINATIONS

The Associate Membership Examination is set in three parts. Before entering the examination the candidate must have G.C.E. 'O' level passes in English Language, Elementary Mathematics and two other approved subjects, or the equivalent.

Exemption from Part I is gained by candidates who have passed the Joint Part I of the Engineering Institutions' Examination, and other examinations of similar standing.

Exemption from Parts I and II may be granted to holders of approved H.N.C.'s. Exemption is granted from the whole examination in respect of the Institution's Diploma Examination; the Testamur examination of the Institution of Mechanical Engineers; approved university engineering degrees and diplomas; Associate Membership examination of the Institutions of Civil, Heating and Ventilating, or Sewage Purification Engineers; Diploma in Public Health Engineering, Imperial College, London, or of the University of Newcastle upon Tyne.

The Diploma of the Institution of Public Health Engineers. This diploma provides a qualification for corporate membership at an advanced technical and academic level. The examination is taken in two parts followed by a professional interview. Members

of the Institution who hold the Diploma may proceed to the professional interview of the Institution of Civil Engineers. Likewise the diploma may be granted to candidates qualified in certain subjects in the Institution of Civil Engineers' examination.

UNIVERSITY DEGREES AND DIPLOMAS

(i) DEGREE

Birmingham C.A.T. B.Sc. in Environmental Health: 4-year sandwich course. 2 'A' level passes or good O.N.C. or O.N.D. required.

Welsh C.A.T. B.Sc.(Tech.) in Environmental Health: 4 years sandwich. 2 'A' level passes, including Biology or Zoology, Physics or Chemistry.

(ii) UNIVERSITY DIPLOMAS

University of Newcastle: Postgraduate Diploma in Public Health and Municipal Engineering. 1-year course. (Also 1-year Certificate course.)

University of London (Imperial College): Diploma in Public Health Engineering. 1-year course.

(iii) ASSOCIATESHIP

Ordinary Associateship of the Royal College of Advanced Technology, Salford: 3 years sandwich.

NATIONAL CERTIFICATE

Higher National Certificate (H.N.C.) courses in Public Health Engineering are available at certain colleges. These are 2-year courses, normally following completion of an appropriate Ordinary National course in engineering.

RAILWAY SIGNAL ENGINEERING

The Institution of Railway Signal Engineers

21, Avalon Road, Earley, Reading, Berkshire

Members (M.I.R.S.E.) must be at least 30 years of age and hold the position of signal, telegraph or telecommunication engineer upon a railway, or be deputy or chief assistant to a person holding

such a position, or hold a high position in a company manufacturing or installing railway signalling, telegraph or telecommunication equipment and be directly concerned with manufacture or installation or be a leading assistant to such a person. In addition they must have been engaged for a sufficient period in the profession. Other qualifications and experience may be accepted in lieu of these.

Associate Members (A.M.I.R.S.E.) must be at least 26 years of age and have been regularly trained in the profession, having satisfied the examination requirements and held a responsible position in the profession for at least two years. Other qualifications and experience may be accepted in lieu of these.

Associates (Assoc.I.R.S.E.) must be at least 30 years of age, and although not actually engaged in the profession, be actively interested in it, or so connected or engaged in the profession that their election would conduce to the interest of the Institution.

Graduates (Grad.I.R.S.E.) must be at least 21 and not more than 35 years of age, and have received an approved general and technical education and satisfied the examination requirements of the Institution and be receiving adequate training and experience of the practical side of the profession, thereby making progress to Associate Membership.

Students (Student I.R.S.E.) must be more than 16 but not more than 28 years of age, have passed a prescribed examination, and be employed and be receiving regular and practical training in some branch of the profession.

Technician Members must be at least 24 years of age and have been for at least three years engaged in planning, installation, maintenance or manufacture of signalling or telecommunication equipment.

The Institution also elects **Honorary Members (Hon. M.I.R.S.E.)**.

EXAMINATION REQUIREMENTS

The Institution's Examination consists of two sections. Section A is Railway Signalling; Section B is Telecommunications as applied to railway working. Candidates must pass in either section. Candidates for the examination must have passed, or gained exemption from, Parts I and II of the Institution examination of either the Institution of Electrical Engineers or of the Institution of Mechanical Engineers. Other equivalent qualifications may be considered in lieu of these, and the Council may, alternatively, allow a candidate to submit a thesis instead of taking the Institution's examination.

REFRIGERATION ENGINEERING

The Institute of Refrigeration

New Bridge Street House, New Bridge Street, London, E.C.4

Members (M.Inst.R.) must be at least 33 years of age, and have been Associate Members for at least three years, and been engaged for at least five years in a position of important responsibility in the refrigerating or an allied industry *or* must be at least 35 years of age and possess the qualifications required for Associate Membership, and have been engaged in an important position of responsibility, or in research or education in refrigeration.

Associate Members (A.M.Inst.R.) must be not less than 25 years of age and have been engaged for at least five years in the refrigerating or allied industry or in learning or research in refrigeration. They must also have passed or gained exemption from the examination for Associate Membership. Candidates over 30 years of age may submit a thesis in lieu of parts of the examination. The Associate Membership examination consists of two parts.

Graduates (Grad.Inst.R.) must be not less than 20 years of age or more than 30 years of age, and must have passed Part A of the Institute's examination or gained exemption from it.

Students (Stud.Inst.R.) must be not less than 16 years of age or more than 25 years of age, and must be undergoing regular training in science or practice of refrigeration.

Honorary Members are persons distinguished in science, industry, commerce or public service whom the Institute desires to honour.

Companions (C.Inst.R.) are not actively engaged in refrigeration but have rendered such important service to refrigeration in fields of law, commerce, science or finance that admission is in the interest of the Institute.

Associates (A.Inst.R.) are at least 25 years of age and do not qualify for corporate membership, but have gained a position of responsibility in refrigeration or passed section A of the Associate Membership examination.

EXAMINATION REQUIREMENTS

There are two parts to the examination requirements.

Exemption from section A is obtained by holders of an O.N.C. in Mechanical Engineering (including Applied Heat or Heat Engineering) or equivalent.

Section B is the Full Technological Certificate of the C.G.L.I. in

Science and Technology of Refrigeration (Subject No. 73). Exemption is gained by holders of Engineering or Science Degrees or Dip.Tech. in appropriate subjects; a Whitworth Scholarship or Exhibition; A.M.I.C.E.; A.M.I.Mech.E.; A.M.I.E.E.; A.M.I.-Mar.E.; A.M.I.Chem.E.; A.M.I.H.V.E.; Diploma or Associateship of the National College of Heating, Ventilating, Refrigeration and Fan Engineering; H.N.C. in Mechanical Engineering with endorsement in Refrigeration Engineering.

DIPLOMAS AND CERTIFICATES

All the following awards are offered at **The National College of Heating, Ventilating, Refrigeration and Fan Engineering, Borough Polytechnic, London.**

College Diploma in Refrigeration Engineering: 1-year full-time course intended for apprentices. Minimum age of entry 18 years. 1st year H.N.C. in Mechanical Engineering, O.N.C. including Applied Heat or G.C.E. 'A' level in Physics and four other 'O' level passes.

Higher Diploma in Environmental Engineering: 3-year sandwich course. Minimum age of entry 18 years. G.C.E. 'A' level pass in Physics or Mathematics and four other 'O' level passes, or O.N.C. including Applied Heat required.

Postgraduate Associateship Course (Advanced Study) or (Research): 1-year courses. Entry qualifications: Diploma or Higher Diploma of College, or H.N.C., H.N.D. in Mechanical Engineering; Degree in Mathematics, Physics or Engineering; Dip.Tech.

CITY AND GUILDS OF LONDON INSTITUTE EXAMINATIONS

C.G.L.I. examinations are set in the following:

Refrigeration Practice (Subject No. 72)

Science and Technology of Refrigeration (Subject No. 73).

A Full Technological Certificate is available in this subject.

ROAD TRANSPORT ENGINEERING

The Institute of Road Transport Engineers

1, Cromwell Place, London, S.W.7

The corporate grades of membership are Ordinary Membership, Associate Membership and Associateship. In addition to the

requirements described below, corporate members must normally be at least 30 years of age, have served an Engineering apprenticeship, have approved technical training and responsibility and have responsibility for fleet maintenance.

Honorary Members are persons of standing concerned with or interested in the profession.

Ordinary Members (M.I.R.T.E.) must be road transport engineers of not less than 10 years' experience with chief responsibility for care and maintenance of a fleet of not less than 50 vehicles, or equivalent technical training and experience.

Associate Members (A.M.I.R.T.E.) must have not less than 10 years' experience as a road transport engineer with chief responsibility for maintenance and care of a fleet of not less than 25 vehicles, or equivalent training and experience.

Associates (A.I.R.T.E.) are road transport engineers whose degree of experience would not qualify them for Ordinary or Associate Membership, or are not solely employed in the profession but have chief responsibility for care and maintenance of vehicles or equivalent experience.

Affiliates are persons engaged in an occupation ancillary to or connected with the profession.

Graduates must be not more than 30 years of age and engaged in work or undergone training that will lead to admission to one of the other grades of membership. They must also have passed or been exempted from the examinations prescribed for Graduateship.

Registered Students must be at least 16 but not more than 25 years of age and pursuing a course of study for examinations leading to Graduateship.

EXAMINATION REQUIREMENTS

The City and Guilds of London Institute Motor Vehicle Technician's Certificate qualifies Registered students for transfer to Graduateship. Other engineering qualifications may be accepted in lieu of this qualification.

CITY AND GUILDS OF LONDON INSTITUTE EXAMINATION

(See also *Automobile Engineering*, page 640.)

The C.G.L.I. conducts examinations in Motor Vehicle Technician's Work (Subject No. 170), Motor Vehicle Mechanic's Work (Subject No. 168) and Motor Vehicle Electrician's Work (Subject No. 169).

EXAMINATIONS OF THE REGIONAL EXAMINING UNIONS

The various Unions conduct a number of relevant examinations. For details, refer to Automobile Engineering, page 640.

SHEET METAL ENGINEERING

The Institute of Sheet Metal Engineering

John Adam House, 17-19, John Adam Street, Adelphi
London, W.C.1

Members must be at least 30 years of age and engaged for a sufficient period in a position of technical or scientific responsibility in sheet or strip metal engineering work, and have commensurate technical or scientific qualifications.

Associates are individuals under 25 years of age not qualified for election as Members, but engaged in or associated with work in connection with sheet metal engineering or possess such other acceptable qualifications.

Student is a person otherwise qualified for election as an Associate, but not yet 25 years of age.

CITY AND GUILDS OF LONDON INSTITUTE EXAMINATION

The C.G.L.I. conducts examinations in Sheet Metal Work (Subject No. 66) (Ordinary, Advanced and Full Technological Certificates).

EXAMINATIONS OF THE REGIONAL EXAMINING UNIONS

The various examining bodies conduct examinations in Sheet Metal Work.

STRUCTURAL ENGINEERING

The Institution of Structural Engineers

11, Upper Belgrave Street, London, S.W.1

Members (M.I.Struct.E.) must *either* be at least 33 years of age and have passed the examination for Associate Membership and

subsequently have been engaged in a position of responsibility for at least five years in the design or execution of important Structural Engineering work *or* be at least 43 years of age and have at least 15 years' responsible experience in design or execution of important Structural Engineering work and should have acquired a considerable degree of eminence as a structural engineer. Professors of Engineering in approved colleges, or persons engaged in important Structural Engineering research may be considered to be in a suitable position of responsibility.

Associate Members (A.M.I.Struct.E.) must be at least 25 years of age and have passed the Associate Membership examination. They must also have at least three years' practical experience in Structural Engineering.

Graduates are persons not less than 21 or more than 30 years of age who have passed or gained exemption from the Graduateship examination and are studying or intend to study the profession of structural engineering.

Complete exemption is gained by holders of approved degrees and Dip.Tech.'s in Engineering, H.N.C. in Civil Engineering and certain other H.N.C.'s and H.N.D.'s, Associate Membership examination (parts I and II) of the I.C.E. and certain other Institutions' examinations. Also the same college diplomas can give exemption for the Associate Membership Section A, as well as the following: Loughborough College; Medway C.T.; Swansea University College.

Partial exemption is provided by certain other Higher National Certificates and Diplomas.

Students must not be less than 17 years of age nor over 25 years of age and studying or intending to study the profession of structural engineering. They must also pass a preliminary examination or gain exemption from it. Among the exemption qualifications are G.C.E. 'O' level passes in specified subjects.

Associates (A.I.Struct.E.) are persons not less than 43 years of age who are members of professions allied or kindred to Structural Engineering and are of professional status equivalent to that of Members.

The Institution also designates **Honorary Members (Hon.M.I.-Struct.E.)**, **Honorary Associates (Hon.A.I.Struct.E.)**, **Retired Members (M.I.Struct.E.(ret.))**, and **Retired Associates (A.I.Struct.E.(ret.))**.

EXAMINATIONS

The Associate Membership Examination is in two Parts, A and B. There is no exemption from Part B.

Before taking Part A the candidate must pass the Graduateship examination or gain exemption from it, and have passed an examination recognised as qualifying for Studentship.

Exemption from Part A is gained by holders of British degrees in engineering and Dip.Tech.'s in which Theory of Structures was taken as a principal subject. Also certain H.N.C.'s in Civil Engineering (countersigned by the Institution) and endorsed H.N.C.'s in Building, as well as the Part II examination of the Associate Fellowship Examination of the R.Ae.S.

The Diplomas or Associateships of the following colleges also provide exemptions:

Robert Gordon's T.C.; Bolton T.C.; Brighton C.T.; Heriot-Watt College; Enfield C.T.; Glamorgan T.C.; Glasgow Royal College of Science and Technology; Hatfield C.T.; Kingston C.T.; Brixton School of Building; Hammersmith College of Art and Building; Regent Street Polytechnic; Willesden T.C.; Lanchester C.T.; Constantine C.T.; Royal Melbourne Institute of Technology (Full-time Associate Diploma in Civil Engineering); Salford Royal C.A.T.; Twickenham C.T.

Research workers are permitted to present a thesis or other written evidence of their research in place of Section B of the examination, provided they have passed or gained exemption from Section A.

UNIVERSITY DEGREE AND DIPLOMAS

(i) DEGREE

Sheffield. B.Eng. in Civil and Structural Engineering: 3 years. 'A' levels in Physics, Pure and Applied Mathematics.

Wales (Cardiff). B.Sc. in Civil and Structural Engineering: 3 or 4 years. 3 'A' levels, including Physics and Chemistry, or H.N.C./H.N.D. for the 3-year course; 2 'A' levels or O.N.C./O.N.D. for the 4-year course.

(ii) DIPLOMAS AND CERTIFICATES

Birmingham C.A.T.: Associateship in Structural Engineering.

University of Cambridge: Postgraduate Certificate in Structures and Strength of Materials. 1-year course.

University of London, Imperial College (D.I.C.): Postgraduate Diploma in Structural Engineering or in Concrete Structures and Technology. 1-year courses.

University of Newcastle: Postgraduate Certificate in Structural Design. 1-year course.

University of Southampton: Postgraduate Diploma (D.U.S.) in Advanced Structural Engineering. 1-year course.

CITY AND GUILDS OF LONDON INSTITUTE EXAMINATIONS

C.G.L.I. courses are conducted in:

Structural Engineering (Subject No. 91) (Intermediate and Final)

Concrete Practice (Subject No. 93)

Form Work and Shuttering for Concrete Construction (Subject No. 95)

Concrete Technology (Supervisory Level) (Subject No. 110)

Structural Detailing (Subject No. 288)

Higher Certificate in Civil Engineering (overseas only) (Subject No. 308)

Construction Technician's Certificate (Subject No. 314)

General Course in Construction (Subject No. 313)

Ordinary Technician Diploma in Building and Civil Engineering (overseas only) (Subject No. 328).

WATER ENGINEERING

The Institution of Water Engineers

11, Pall Mall, London, S.W.1

Members (M.I.W.E.) are senior and widely experienced members of the profession occupying positions of major responsibility.

Associate Members (A.M.I.W.E.) must be at least 25 years of age with suitable education and engineering training, and engaged as engineers on works for the supply, control or utilisation of water. In addition, Associate Membership or Membership of the Institutions of Civil, Mechanical or Electrical Engineers is required.

The Institution also has **Professional Associates** from other training disciplines and **Students**.

EXPORT

Institute of Export

Export House, 14, Hallam Street, London, W.1

Member (M.I.Ex.). A corporate member must have had considerable experience in a responsible position in exporting, or must have been an Associate Member, or should have experience and have passed the Institute's examinations. Corporate Members are elected by reason of their eminence, experience and service to the profession.

Associate Member (A.M.I.Ex.). An Associate Member must hold a position of responsibility in export and must have passed or obtained exemption from the Institute's examinations. Senior export personnel over the age of 35 years may be admitted to the Institute without satisfying the examination requirements.

A Registered Student is one who is studying for the Institute's examinations; he should be at least 16 years old and have passes in G.C.E. 'O' level (or an equivalent examination) in three subjects including English. Students are required to pass the final within six years of registration.

THE QUALIFYING EXAMINATIONS

(Exemptions from these examinations may be granted for equivalent qualifications. Each case is considered individually.)

The Intermediate Examination is open to Registered students of the Institute. It covers Commerce, English for Commerce, Commercial Geography and general principles of Law.

The Final Examination is taken in two parts; candidates for Part I must be at least 18 years old and have passed the Intermediate; for Part II they must be at least 30 years old and have passed Part I. Part I covers export practice, principles of marketing overseas, international trade and payments and commercial Law; Part II covers export practice, principles of marketing overseas, finance of foreign trade, insurance of export cargoes and Law of carriage of goods.

DIPLOMA

College Diploma in Overseas Marketing, Woolwich Polytechnic. This Diploma may be taken after a four-year sandwich course. It covers much the same ground as the Institute of Export Examinations.

FLORISTRY

The Society of Floristry Ltd.

7, Henrietta Street, London, W.C.2

Member (M.S.F.). Membership is open to holders of the Society's Diploma in Floristry or the Diploma in Floral Art of the Royal Horticultural Society.

Associate Member (A.S.F.). Associate Members must normally have passed the Senior Examination of the Society; the Society occasionally grants Associate Membership without examination to people whose work has raised the standard of floristry.

THE QUALIFYING EXAMINATIONS

The National Examination Board of the Society conducts three examinations which are taken by students in schools of floristry (courses from three months to one year) and by apprentices and trainees in the floristry trade. Day-release classes lasting three years and preparing students for these examinations are available at some technical colleges for those working in the trade.

The Preliminary Examination is intended primarily for florists with at least one year's practical experience. It includes a practical test on flower arranging, wiring and packing, and written and oral questions on flowers, florists' tool and routine duties in a florist's shop and workroom.

The Senior Certificate Examination is intended for florists with good practical experience. The practical section tests the florist's ability to make up all kinds of arrangements, bouquets and wreaths, and the written and oral section covers flowers, colour and harmony, shop routine and window dressing, interviewing customers and various types of floral decoration. A pass in this examination makes a candidate eligible for Associate Membership of the Society.

Diploma in Floristry (S.O.F. Dip.). This examination is intended for experienced professional florists who have already taken the Senior Certificate examination. The practical, written and oral tests cover the material included in the Senior Certificate examination and also market buying, management, judging techniques, floristry terms, principles of flower arrangement, advanced arrangements and flower-show management. A pass in this examination qualifies a candidate for full Membership of the Society.

The Society plans to start a **Professional Judge's Examination** in the near future.

OTHER QUALIFICATIONS

Royal Horticultural Society Diploma in Floral Art. The syllabus for this Diploma is similar to the Diploma in Floristry of the Society of Floristry and holders are eligible for full membership of the Society.

FORESTRY

UNIVERSITY DEGREES AND DIPLOMAS

(i) FIRST DEGREES

University of Aberdeen. B.Sc.(For.): 3 years—with Hons. 4 years. Entry requirements: *See* Certificate of Attestation of Fitness. Course requirement: Mathematics at Higher Grade S.C.E. is normally required.

University of Edinburgh. B.Sc.: 3 years—with Hons. 4 years. Entry requirements: *See* Certificate of Attestation of Fitness. Course requirement: S.C.E. passes in either Mathematics on the Higher Grade with Science (Chemistry and Physics) on the Higher Grade, or Mathematics on the Higher Grade with Science (Chemistry and Biology) on the Higher Grade and Physics on the Ordinary Grade, or Mathematics on the Ordinary Grade with Science (Chemistry and Physics) on the Higher Grade; Biology on the Higher Grade should normally be offered in this case.

University of Oxford (Commonwealth Forestry Institute). B.A. Hons.: 4 years—1st year spent in studying for the Preliminary Examination in Biology, i.e. Biology, Chemistry and Physics for biologists and Geology for biologists. Entry requirements: A pass in the Use of English and G.C.E. passes at 'O' or 'A' level to include (i) two approved foreign languages and (ii) a mathematical or scientific subject and one other subject. Two 'A' level passes are required.

University of Wales, Bangor. B.Sc. Hons.: 4 years. Entry requirements: 2 'A' level G.C.E. passes in scientific subjects. For exemption from the first year of the course 'A' level passes in Chemistry, Botany and either Physics or Zoology are required.

(ii) HIGHER DEGREES

Research facilities are available at the following Universities.

University of Aberdeen. M.Sc., Ph.D.

University of Edinburgh. M.Sc., Ph.D.

University of Oxford. D.Phil. Granted after a minimum period of six terms' study.

University of Oxford. B.Sc. Granted after a minimum of six terms' study.

University of Wales, Bangor. M.Sc. Granted after a minimum of two years, or one year for Honours graduates.

University of Wales, Bangor. Ph.D. Granted after a minimum period of three years' study.

(iii) UNIVERSITY POSTGRADUATE DIPLOMAS

University of Edinburgh. Diploma in Forestry. This is taken after a one-year postgraduate course for graduates in Forestry of an approved university other than Edinburgh.

University of Oxford. Diploma in Forestry. This Diploma is awarded for a one-year postgraduate study of an approved subject in forestry. It is open only to those who have graduated in forestry or in one of the connected subjects, including economics, or who have equivalent qualifications.

University of Wales, Bangor. Diploma in Forestry. This postgraduate Diploma is awarded for a one-year scheme of research or special study approved by the University Faculty of Rural Science.

NATIONAL DIPLOMA

National Diploma in Forestry (N.D.F.) is awarded by the Central Forestry Examination Board of the U.K. (Constituent bodies: The Royal Scottish Forestry Society, The Royal Forestry Society of England, Wales and Northern Ireland and The Society of Foresters in Great Britain.)

Candidates for this qualification must be at least 25 years old and have held for at least three years one of the following certificates: The Senior Forester's Certificate of the Royal Scottish Forestry Society *or* The Forester's Certificate of the Royal Forestry Society *or* The Forester's Certificate of the Forestry Commission.

The examination, which is taken after part-time study, is in the form of written papers and a subsequent oral and practical test for successful candidates.

The syllabus covers Forest Ecology, Protection, Silviculture, Management, Extraction, Law, Valuation and accounting, and 'the Diploma shows that, in the opinion of the Board, the holder is so qualified in forestry, as practised in Great Britain and Northern Ireland, as to take full charge of extensive woodlands of a private or other estate'.

OTHER QUALIFICATIONS

- (i) QUALIFICATION AWARDED BY THE FORESTRY COMMISSION: 25, Savile Row, London, W.1.

Forester's Certificate. This is taken after a four-year period of training, two years of which are spent in full-time study at one of the Commission's three residential schools, in England, Wales or Scotland.

Applicants must have passed G.C.E. or S.C.E. in three subjects, including English Language and Mathematics, within five years of the date of application or must pass the Commission's entrance examination in English, Mathematics and General Knowledge. The C.S.E. with Grade I passes in English Language, Mathematics and one other subject also gives exemption from the examination.

Practical forest training is the first part of the course; candidates must be between 19 and 25 years when starting the second part at Training School.

The syllabus covers Botany, Soils, Nursery, Management, Protection, Silviculture, Surveying, Forest Administration and Farm Management.

- (ii) QUALIFICATIONS OF THE ROYAL FORESTRY SOCIETY OF ENGLAND, WALES AND NORTHERN IRELAND: 49, Russell Square, London, W.C.1.

Woodman's Certificate. This qualification is available to candidates of at least 18 years who either have spent two or more years in practical work on a woodland estate or have spent one year at an approved forestry school. The examination is practical and oral and takes place on one day. It is designed to test a man's ability to perform forestry operations in a skilful manner, to carry out directions or to act as a leading man or ganger. The syllabus covers Identification, Nursery Work, Planting, Measuring, Felling, Accounts, Pests and Damage.

Forester's Certificate. Candidates for this qualification must have held for at least one year either the Woodman's Certificate described above or the Junior Certificate of the Royal Scottish Forestry Society. They must also have spent three years in training

on a woodland estate or two years at a forestry school.

The examination (oral and practical, and written) is designed to test the candidate's ability to plan and carry out forestry operations and to provide written reports for his employer. The syllabus covers Silviculture, Forest Management, Utilisation, Measurement, Botany and Protection.

Certificate in Arboriculture. Candidates must be at least 18 years old. The examination is by written and practical tests and the syllabus covers Botany, Nursery Work, Planting, Maintenance, Pests, Tree Surgery, Legal questions and care and use of tools.

Diploma in Arboriculture. Candidates must have passed the certificate examination described above. The syllabus covers the same general fields as the certificate syllabus but in greater detail and includes a section on design and layout.

Both the Certificate and the Diploma are taken after part-time study, and would be suitable for workers in botanical gardens and ornamental woodlands as well as forest estate workers.

- (iii) QUALIFICATIONS OF THE ROYAL SCOTTISH FORESTRY SOCIETY: 7, Albyn Place, Edinburgh, 2.

Junior Forester's Certificate. This is awarded to candidates who have had at least two years' experience in forestry. The examination is mainly oral and practical and is similar in standard and scope to the Royal Forestry Society's Woodman's Certificate.

Senior Forester's Certificate. Candidates for this certificate must hold the Junior Certificate described above or an equivalent qualification. The examination consists of six written papers followed, about a month later, by an oral and practical test.

The standard and syllabus of the Senior Forester's Certificate are similar to those of the Royal Forestry Society's Forester's Certificate.

FOUNDRY TECHNOLOGY AND PATTERN MAKING

The Institute of British Foundrymen

137-139, Euston Road, London, W.1

Fellows must be at least 35 years of age and have been engaged for a sufficient period in an important position of responsibility in

founding, and either have been a Member or possess qualifications for Membership. Alternatively they must have attained a position of eminence in founding or a related industry by contribution to the science or practice.

Members must be at least 26 years of age, have passed specified qualifying examinations, and held for a sufficient period a post of professional responsibility.

Associate Members must either (i) be at least 30 years of age and have been engaged in founding for at least five years, and held a position of senior supervisory or technical responsibility for three years. Or (ii) be at least 26 years of age, passed prescribed examinations, have been engaged in founding for at least seven years, and attained a position of responsibility. Or (iii) be at least 35 years of age, trained in an ancillary industry and held for at least five years an important position, technical or managerial, in founding. Or (iv) be at least 30 years of age, hold an important position in an industry related to founding, and made a suitable contribution to founding. Or (v) be at least 21 years of age but not old enough to qualify as a Member.

Associates must either (i) be at least 21 years of age, engaged in founding for at least five years and hold a position of supervisory or technical responsibility. Or (ii) be at least 23 years of age, have been in founding for at least five years and acquired and be applying some skill in a branch of founding. Or (iii) be at least 25 years of age, have been regularly trained in an occupation ancillary to founding, and held for at least three years a position of technical responsibility in founding. Or (iv) be at least 28 years of age, been trained in founding and been engaged in a technical or supervisory post for at least three years. Or (v) be qualified as an Associate Member but not attained the qualifying age.

Students must either (i) be a student of Pattern Making, Foundry Science, Metallurgy or Engineering in a recognised university or technical school. Or (ii) be undergoing training in a pattern shop, foundry or metallurgical laboratory, or engineering establishment combined with a suitable theoretical course.

QUALIFYING EXAMINATIONS

For Fellowship or Membership: (i) H.N.C. or H.N.D. in Foundry Technology with specified endorsements, (ii) degree or equivalent in Foundry Technology of a British university or C.A.T., (iii) Honours or postgraduate degree in Metallurgy, Mechanical or Production Engineering, (iv) Pass degree or pass Dip.Tech. in Metallurgy, Mechanical or Production Engineering

with specified endorsements, also (for transition period) H.N.C. in these subjects provided certain endorsements are obtained.

For Associate Membership: (i) H.N.C. or H.N.D. in Foundry Technology, (ii) Degree or diploma of a British university in Foundry Technology, Metallurgy, Mechanical or Production Engineering, (iii) H.N.C. in Metallurgy, Mechanical or Production Engineering, (iv) Diploma of the National Foundry College or British Foundry School, (v) Diploma of Constantine Technical College or of Bolton Technical College, (vi) C.G.L.I. Full Technological Certificate in either Foundry Practice, Pattern Making or Metallurgy.

UNIVERSITY DEGREE

The following course is offered:

Loughborough C.T. B.Tech.: 4 years sandwich. 2 'A' level passes in Physics, Chemistry or Mathematics required.

NATIONAL CERTIFICATES

Higher National Certificates (H.N.C.) courses in Foundry Technology are offered at various colleges. The course is 2 years part-time and entry requirements are either O.N.C. or O.N.D. in Metallurgy or Engineering or 'A' level passes in Physics, Mathematics and Chemistry or Engineering.

COLLEGE CERTIFICATES AND DIPLOMAS

National Foundry College, Wolverhampton. Diploma: 2-year course. Entry requirements are a university degree, H.N.C., C.G.L.I. Advanced Certificate in relevant subjects, or the equivalent.

Other diploma courses are offered by Bolton Technical College; Constantine College of Technology; British Foundry School.

CITY AND GUILDS OF LONDON INSTITUTE EXAMINATIONS

C.G.L.I. examinations are conducted in:

Pattern Making (Subject No. 61) (Ordinary and Advanced)

Foundry Practice (Subject No. 62) (Ordinary and Advanced)

Foundry Craft Practice (Subject No. 249)

Foundry and Pattern-shop Technician's Certificate (Subject No. 321).

EXAMINATIONS OF THE REGIONAL EXAMINING UNIONS

The Union of Lancashire and Cheshire Institutes. Foundry Craft Practice; Foundry; Foundry and Pattern-shop Technician's Course; Pattern Making.

East Midland Educational Union. Course in Foundry Practice.

Northern Counties Technical Examinations Council. Foundry Work; Pattern Making; Foundry Craft Practice; Foundry and Pattern-shop Technician's Course.

FUEL TECHNOLOGY

The Institute of Fuel

18, Devonshire Street, Portland Place, London, W.1

Fellows (F.Inst.F.) are normally elected by invitation and are persons of international or outstanding national repute in Fuel Technology.

Honorary Members (Hon.M.Inst.F.) are persons of outstanding distinction, limited in number to eight in all.

Members (M.Inst.F.) must be at least 33 years of age and had five years' responsible professional experience and superior responsibility and either have been an Associate Member for three years or have completed the examination qualification. Alternatively, the candidate must have full technological qualification or have had professional experience with superior responsibility for at least six years.

Associate Members (A.M.Inst.F.) must be at least 25 years of age and have either (i) University first or higher degree, Dip.Tech., M.C.T., or equivalent qualification in Fuel Technology (or in Chemical Engineering or Applied Chemistry with sufficiently strong bearing on Fuel Technology); or (ii) C.G.L.I. Full Technological Certificate in Advanced Fuel Technology.

Holders of the following qualifications must pass a supplementary examination in Fuel Technology (normally C.G.L.I. papers in Advanced Fuel Technology). Fuel degree or Dip.Tech. in Science or Engineering; A.R.I.C., A.M.I.Chem.E., A.M.I.E.E., A.M.Inst.-Gas E., A.M.I.H.V.E., A.M.I.Mech.E., A.M.I.Mar.E., A.I.M., A.M.I.Min.E., A.Inst.P., H.N.C. or H.N.D. Extra exemption is

granted in some of the above categories if certain papers have been taken in their qualifying examinations. In addition, candidates must normally have had two years' approved training and one year's practical experience in Fuel Technology and be engaged professionally in a branch of Fuel Technology.

Graduates must be at least 21 years of age but not more than 28 and have passed the qualifying examination for Associate Membership.

Students must be between 16 and 28 years of age and must either be or have been a student at a recognised university, college or school, or a pupil or assistant to a corporate Member of the Institute.

The Institute of Petroleum

61, New Cavendish Street, London, W.1

This is a non-qualifying body. However, Fellows and Associate Fellows must be persons of technological attainment.

Fellows (F.Inst.Pet.) must be at least 30 years of age and have suitable scientific or technological attainments, together with at least five years' superior responsibility in petroleum science.

Honorary Fellows (Hon.F.Inst.Pet.) and **Honorary Members (Hon.M.Inst.Pet.)** are also elected.

Associate Fellows (A.F.Inst.Pet.) are at least 23 years of age and have acceptable scientific or technological attainments, and not less than one year's experience in Petroleum Science.

Members (M.Inst.Pet.) must be at least 30 years of age and have at least five years' superior responsibility in petroleum or allied industries.

Associate Members (A.M.Inst.Pet.) are at least 23 years of age and must satisfy the Council that they are desirous of furthering the aims of the Institute.

Student Members (Stud.Inst.Pet.) are not less than 17 and not more than 23 years of age and must be following a course of study with the intention of becoming an Associate Member or Associate Fellow.

UNIVERSITY DEGREES AND DIPLOMAS

(i) UNIVERSITY DEGREES

Degrees listed below have special reference to Fuel. For higher and other degrees refer to entries under individual universities in Part 4.

Birmingham. B.Sc. Chemical Engineering: 3 years. 3 'A' level passes required, including Physics and Chemistry.

Glasgow. B.Sc. in Applied Chemistry: 4 years. 3 'A' level passes including Mathematics.

Leeds. B.Sc. in Fuel Engineering or Science: 3 or 4 years. 3 or 4 'A' levels.

London (Imperial College). B.Sc. in Oil Technology, B.Sc.(Eng.) in Chemical Engineering: 3-year course. 3 'A' level passes including Physics and Chemistry.

Sheffield. B.Sc.Tech. in Fuel Technology and Chemical Engineering: 3-year course. 3 'A' level passes, Mathematics, Physics and Chemistry.

Manchester. B.Sc.Tech. in Fuel Technology: 3 years. 3 'A' level passes including Physics and Chemistry required.

Wales (Cardiff). B.Sc. in Fuel Technology: 3 years. 3 'A' level passes, including Chemistry required.

(ii) UNIVERSITY DIPLOMAS AND CERTIFICATES

University of Birmingham: postgraduate diploma in Petroleum Production Engineering. 1-year course.

University of Leeds: postgraduate diploma in Fuel Science.

University of London (Imperial College): postgraduate courses (leading to D.I.C.) in Fuel Technology and Petroleum Reservoir Engineering.

University of Newcastle: postgraduate certificate in Fuel Technology. 1-year course.

University of Nottingham: certificate in Fuel Technology (undergraduate or postgraduate).

University of Sheffield: associateship in Fuel Technology. 1-year course.

CITY AND GUILDS OF LONDON INSTITUTE
EXAMINATIONS

C.G.L.I. examinations are set in the following subjects:

Advanced Fuel Technology (Subject No. 5)

Petroleum and Petroleum Products (Subject No. 7).

FUNERAL DIRECTION,
BURIAL AND CREMATION

National Association of Funeral Directors

57, Doughty Street, London, W.C.1

Members are firms engaged wholly or partly in Funeral Direction, who nominate as their representative the principal executive

in the funeral department. Since January 1965 members have been required to pass an entrance examination which consists of an interview and an inspection of premises.

Persons, firms and companies who hire hearses and passenger cars are also eligible for full membership.

Associate Members are those firms which are engaged in Funeral Direction and are ineligible for or do not wish to take up full membership. A second class of Associate Membership is for those working in ancillary professions such as Embalming or Monumental Masonry.

The Diploma in Funeral Direction (Dip.F.D.) is open to members and non-members of the Association, and consists of a written paper based on the Association's own Manual of Funeral Direction and an oral practical test. The examinations are normally held in the autumn each year at a number of centres.

Fully qualified funeral directors normally obtain during their training the qualification of the British Institute of Embalmers (*see* Embalming, page 623).

The Institute of Burial and Cremation Administration

Cemetery and Cremation Offices, Glyntal, Pontypridd,
Glamorgan

Fellows (F.Inst.B.C.A.) are elected from those Members who have held Membership for at least 15 years or, in the case of Members who have passed the Final Examination of the Institute, for at least five years. Candidates must have been for at least seven years the responsible officer in charge of a cemetery and crematorium, or for 10 years in charge of a cemetery or a crematorium. The holder of the Final Examination Certificate must have been for three years in charge of a cemetery or crematorium. Candidates for Fellowship are expected either to have prepared a thesis or to have rendered some outstanding service to the Institute.

Full Members (M.Inst.B.C.A.) are elected from those who either have for two years held the position of superintendent, registrar, curator, assistant superintendent, assistant or deputy registrar, assistant curator, clerk or deputy clerk, or secretary or assistant secretary to a burial or cremation authority; or those who, having passed the Final Examination of the Institute, have been Associate Members for at least three years.

Associate Members (A.M.Inst.B.C.A.) are elected from three groups of applicants: those who have for two years been employed in administrative or clerical work in a burial or cremation auth-

ority; those who have been foremen with such an authority for at least two years; registered students of the Institute who have passed the Intermediate Examination.

Students must be at least 16 years old. Those born after 1st January, 1934, must hold G.C.E. 'O' level (or equivalent) passes in at least two subjects including English language. Those born before 1934 who have not obtained such qualification may be required to pass a preliminary examination before going on to study for the Institute's Intermediate and Final Examinations.

EXAMINATIONS

The Intermediate Examination is open to Registered Students of the Institute. The syllabus includes Layout and Management of Cemeteries; Cemetery Office Records and Administration; Burial and Cremation Law (England and Wales or Scotland); Horticulture Applicable to Cemeteries, Crematoria and Gardens of Remembrance; Cremation.

The Final Examination. Candidates must have passed the Intermediate Examination. The syllabus for the Final covers, at more advanced level, the same subjects as the Intermediate, and in addition to papers on these subjects an oral test is given. Honours and credit passes are awarded to candidates who gain a standard above the pass mark. Successful candidates who have been Associate Members for at least three years are eligible for admission to Membership of the Institute.

FURNISHING

NATIONAL DIPLOMAS AND CERTIFICATES

The Diploma in Art and Design (Furniture) has replaced the former National Diploma in Design. Candidates for admission to Dip.A.D. courses must be at least 18 and have either five G.C.E. 'O' level passes or three G.C.E. 'O' level passes and one G.C.E. 'A' level pass or two G.C.E. 'O' level passes and two G.C.E. 'A' level passes or three G.C.E. 'A' level passes. At least three of the five 'O' level passes, or the equivalent in terms of 'A' level passes, should be in academic subjects and at least one should be in a subject affording evidence of the student's ability to use English.

Courses leading to the Dip.A.D., which last three years, are provided at the following establishments:

Birmingham College of Arts and Crafts; Central School of Arts and Crafts, London, W.C.1; High Wycombe College

of Technology and Art; Hornsey College of Art; Kingston-upon-Thames School of Art; Leeds College of Art; Leicester College of Art; Loughborough College of Art; Newcastle College of Art and Industrial Design; Ravensbourne College of Art and Building, Bromley; West of England College of Art, Bristol.

COLLEGE DIPLOMAS AND ASSOCIATESHIPS

Royal College of Art (Kensington Gore, London, S.W.7). Students who pass the final examination in the School of Furniture Design (after a three- or four-year course) are granted a certificate. After satisfactorily completing a further nine months in a suitable industrial post or on showing that he had worked in such a post before beginning his course, the student may apply for the award of a Diploma entitling him to the style of **Designer of the Royal College of Art (Des.R.C.A.)**.

If a student does not take up an industrial post or if he is unsuitable for such an appointment he may, on the recommendation of his professor or head of department, be awarded the **Diploma of Associateship of the Royal College of Art (A.R.C.A.)**.

High Wycombe College of Further Education: Diploma in Furniture Design and Production (3 years full-time). Diploma in Interior Design (3 years full-time). Diploma in Furniture Production and Management (3 years full-time).

College for the Distributive Trades (London, W.C.2): Certificate in Furniture and Furnishings Distribution (1 year full-time).

Technical College for the Furnishing Trades (Pitfield Street, London, N.1): Certificate in Furniture Technology (3 years full-time). Diploma in Furniture Design and Production (1 year full-time). Certificate in Furnishing and Interior Decoration (3 years full-time).

London College of Furniture (Pitfield Street, London, N.1): College Certificate in Furniture Design and Technology and County Certificate in Art and Design (3 years full-time). College Certificate in Furnishing and Interior Design and the County Certificate in Art and Design (3 years full-time). College Diploma in Furniture Design and Production (1 year full-time).

CERTIFICATES OF THE CITY AND GUILDS OF LONDON INSTITUTE

Licentiateship of the City and Guilds of London Institute in Furniture Industry. The Licentiateship is the highest award

made in furniture and is conferred on students who pass in both the Full Technological Certificate examination and in two of the advanced course examinations in Subject No. 103 (Furniture Industry) (*see below*).

Certificates. The following certificates are awarded:

<u>Subject</u>		
<u>No.</u>	<u>Title</u>	<u>Grades</u>
81	Machine Woodworking	Craft Advanced Craft Full Technological Certificate
103	Furniture Industry	
	A. Cabinet Making	Intermediate and Final
	B. Chair Making	Intermediate and Final
	C. Upholstery	Intermediate and Final
	D. Hand and Spray Polishing	Intermediate and Final
	E. Advanced Course in Furniture Design and Construction	
	F. Advanced Course in Furniture Production	
	G. Advanced Course in Furniture Materials	Full Technological Certificate
241	Home Upholstery and Soft Furnishings	
242	Advanced Home Upholstery and Soft Furnishings (Candidates must usually have passed Course No. 241.)	

CERTIFICATES OF THE REGIONAL EXAMINING UNIONS

The Union of Educational Institutions offers an examination in Soft Furnishings and Home Upholstery for general students.

The Union of Lancashire and Cheshire Institutes offers an examination in Home Upholstery and Soft Furnishings for a Craft Certificate equivalent to the certificate awarded by the C.G.L.I. (Course No. 241).

GEMMOLOGY

The Gemmological Association of Great Britain

St. Dunstan's House, Covey House, London, E.C.2

Fellow (F.G.A.). Fellowship is granted to those who are successful in the Diploma examination of the Association.

The Diploma Examination is taken after a two-year correspondence course run by the Association. The Preliminary examination is taken after one year's study and consists of theory papers only. The Diploma Examination, taken at the end of the course,

is theoretical, practical and oral. The syllabus covers elementary crystallography, physical and optical properties of gems, weight identification and fashioning of gem stones.

CERTIFICATES OF THE CITY AND GUILDS OF LONDON INSTITUTE

The C.G.L.I. conducts examinations in the following subjects at Intermediate and Final levels:

- Goldsmiths' and Silversmiths' Work (Subject No. 130)
- Silversmiths' Work—Allied Crafts (Subject No. 131)
- Jewellery (Subject No. 132).

GEOLOGY

The Geological Society of London

(founded 1807)

Burlington House, Piccadilly, London, W.1

There are no qualifying bodies for geologists; the Geological Society is, however, the senior geological society of the world.

Fellows (F.G.S.) are normally expected to have a degree in Geology or an allied subject or its equivalent, but amateurs are also admitted.

Junior Associates are normally students aged between 18 and 28.

UNIVERSITY DEGREES

Honours courses in Geology are offered at the universities listed here. For details of higher and other degrees refer to the entries for individual universities in Part 4. Most of the universities require 3 'A' levels in science or mathematical subjects, although the universities of Bristol, Leicester, Nottingham (4-year course), London (Birkbeck and Queen Mary Colleges) and Belfast will accept 2 'A' level passes in science subjects from candidates.

Aberdeen. B.Sc.: 4 years.

Belfast. B.Sc.: 3 or 4 years.

Birmingham. B.Sc.: 3 years.

Bristol. B.Sc.: 3 years.

Cambridge. B.A.: 3 years.

Chelsea C.S.T. B.Sc.: 3 years.

- Durham. B.Sc.:** 3 years.
Edinburgh. B.Sc.: 4 years.
Exeter. B.Sc.: 3 years.
Glasgow. B.Sc.: 4 years.
Hull. B.Sc.: 3 years.
Keele. B.A.: 4 years joint.
Leeds. B.Sc. in Earth Sciences: 3 or 4 years.
Leicester. B.Sc.: 3 years.
Liverpool. B.Sc.: 3 or 4 years.
London (Bedford, Birkbeck, Imperial, King's, Queen Mary, University College). B.Sc.: 3 years.
Manchester. B.Sc.: 3 years.
Newcastle. B.Sc.: 3 or 4 years.
Nottingham. B.Sc.: 3 or 4 years.
Oxford. B.A.: 3 years.
Reading. B.Sc.: 3 years.
St. Andrews. B.Sc.: 4 years.
Sheffield. B.Sc.: 3 years.
Southampton. B.Sc.: 3 years.
Wales (Aberystwyth, Cardiff, Swansea). B.Sc.: 3 years.
 The following universities offer **degree courses in Geophysics:**
 Birmingham; Bristol; Cambridge; Leeds; Oxford; Reading
 and Glasgow.
 Imperial College offers a course in Mining Geology.

GLASS TECHNOLOGY

The Society of Glass Technologists

Thornton, Hallam Gate Road, Sheffield, 10

The Society does not conduct examinations.

Honorary Fellows of the Society are elected in recognition of conspicuous service to the Society or distinguished contributions to knowledge in Glass Technology. The number of Honorary Fellows is limited, at any one time, to twelve.

Fellows (F.S.G.T.) are elected, having rendered special service to the Society and having been members for at least five years. The other requirements for Fellowship are: (i) a degree or other qualifications acceptable to the Society, (ii) having been engaged in the glass or an allied industry, or in a technical institution associated with glass, for a period of years determined by the

academic qualification (e.g. a D.Sc. would require a minimum of five years' service, a B.Sc. 10 years), (iii) either having made a noteworthy contribution to knowledge in some branch of Glass Technology or attained a position of responsibility in the industry or in a teaching institution, coupled with positive and adequate service to the Council through one of the Committees.

An Ordinary Member is a person interested in the objects of the Society and is at least 21 years of age.

An Associate Member is at least 18 but not more than 21 years of age.

UNIVERSITY DEGREE AND DIPLOMA

Sheffield. B.Sc.Tech.: 3 years. 3 'A' level passes required. Also 1-year **Postgraduate Diploma** in Glass Technology.

NATIONAL DIPLOMA

Higher National Diploma (H.N.D.) in glass technology. 3-year sandwich course at St. Helens Technical College. Candidates must have an O.N.C. or O.N.D. or an 'A' level pass in Chemistry and 4 'O' level passes in other subjects.

HAIRDRESSING, WIGMAKING, TRICHOLOGY

Training for hairdressing is normally undertaken either by instruction in a salon where many trainees are apprenticed for three years and study part-time for the City and Guilds of London Institute Basic Craft Certificate or a comparable certificate, or by a two-year full-time course in a technical college culminating in the same examinations. There are also intensive courses at private schools of hairdressing.

There are no minimum educational requirements for these methods of training, although for the two-year full-time technical college course students must be at least 16 years old and have a good standard of education, preferably with some knowledge of Physics and Chemistry.

The Hairdressers' Registration Council

39, Grafton Way, London, W.1

Entrance Examination. Passing this examination qualifies a candidate for admission as a 'Registered Hairdresser'. The

syllabus covers tools, brushing and combing, setting of hair, cutting and shampooing. Tests are fairly simple and are taken either in men's or in ladies' hairdressing.

Qualifying Examination. Candidates who pass this examination may be admitted as 'Qualified Registered Hairdressers'. Holders of the C.G.L.I. Basic Craft Certificate are exempted from this examination which is similar in standard and scope.

An Honours Examination is also conducted; this requires a higher standard.

Incorporated Guild of Hairdressers, Wigmakers and Perfumers

33, Great Queen Street, London, W.C.2

General Certificate in Ladies' Hairdressing. The examinations for this Certificate may be taken by master hairdressers, assistants and by students in technical colleges and apprentices who are at least two-thirds of the way through their indenture or course. It is not confined to Guild members (membership is by subscription).

Holders of the Certificate are accepted by the Hairdressers' Registration Council for admission as Registered Hairdressers. Candidates who obtained 80% of possible marks are awarded an **Honours Certificate**—60% is the pass mark. The Examination includes practical tests on electrical treatment and scalp massage, hair cutting, shampooing, waving, setting, colouring (oral and practical), deportment and handling of tools, and a written examination on hygiene, chemicals and other topics.

WIGMAKING

There are no specific qualifications in wigmaking; trainees and apprentices in wig manufacture are usually taught on the job.

Board work is, however, included as a subject in the C.G.L.I. Hairdressing Certificates 263 and 264.

TRICHOLOGY

The Institute of Trichologists (Incorporated)

228, Stockwell Road, Brixton, London, S.W.9

Fellowship (F.I.T.) is open to members of the Institute of three years' standing who have passed an examination and submitted a thesis.

Members (M.I.T.) may be (i) Associate Members, who have been Associate Members or Associates in practice for at least three years or, if not in practice, have contributed toward the profession; or, until August 1966, (ii) have passed the Preliminary, Intermediate and Final examinations of the Institute for admission to membership.

An Associate Member must have passed one of two examinations, Part I and Part II of the Institute's Associate Membership examination or the Preliminary, Intermediate and Final examinations of the Institute (until August 1966).

An Associate Member must also be at least 21 years old and either have been an apprentice for three years or have completed a period of clinical experience of at least 100 hours.

An Associate is one who has complied with the regulations for Associate Membership but has not reached the age of 21 years.

A Registered Student is one who is studying for the Institute's examinations. He must have passed G.C.E. 'O' level (or a comparable examination) in English language, mathematics, chemistry or physics.

THE INSTITUTE'S EXAMINATIONS

The Fellowship Thesis and Examination. This is open to members of the Institute of three years' standing. The thesis must consist of the candidate's account of his own research. The examination, taken by those successful in the thesis, may be written, practical and/or oral, on the thesis itself and on related subjects.

The Associateship Examination. Parts I and II. This is open to Registered Students of the Institute. To pass Part I a candidate must hold G.C.E. (or equivalent) passes at 'A' level in Chemistry and at 'O' level in Biology; and pass the Institute's examination in Materia Medica, Pharmacy and Hygiene. (Normally no exemption is given from the latter.)

Part I must be passed before a candidate may proceed to Part II, which consists of a written, an oral and practical tests in the following subjects: ray and electro-therapy; massage; histology of the hair and skin diagnosis and treatment of maladies peculiar to the scalp and hair.

The Examinations for Admission of Members and Associate Members—until August 1966. These examinations are open to registered students of the Institute.

The Preliminary Examination. The subjects of the examination are elementary Inorganic Chemistry; elementary Physics; elementary Physiology. Candidates must also pass (or hold already) G.C.E. 'O' level Biology.

Exemption from the Preliminary may be granted to students who have passed G.C.E. or S.C.E. 'O' level in Chemistry, Physics and either Physiology or Biology.

The Intermediate Examination covers Organic Chemistry; materia medica and Pharmacy, Anatomy, Physiology and Histology of the skin; Physics. No exemptions are granted from this examination.

The Final Examination consists of written, oral and practical tests. The subjects covered are light and ray therapy; microscopy; massage; electricity and electrotherapy; hygiene; maladies peculiar to the scalp and hair.

CITY AND GUILDS OF LONDON CERTIFICATES

Basic Craft Certificate 263. The examinations for this Certificate may be taken either in ladies' or in men's hairdressing. Both sections include papers on art, salon work and board work (wigmaking) and on science and hygiene, and a practical test.

Advanced Craft Certificate 264. These examinations are taken after a further one to two years' part-time training. Taken in either men's or ladies' hairdressing, the examination includes papers on board work, art and design, salon work and science, and a practical test.

Two-year full-time courses, in lieu of apprenticeship and leading to C.G.L.I. Basic Craft Certificate, are held at the following Colleges:

Bournemouth Municipal College; Chiswick Polytechnic; Technical College, Colwyn Bay; Erith Technical College; Harrow Technical College; Ipswich Civic College; London College of Fashion; The Manchester Domestic and Trades College; Clarendon College, Nottingham; Oxford College of Technology; Pontypridd College of Further Education; Slough College of Further Education; Tottenham Technical College.

CERTIFICATES OF THE REGIONAL EXAMINING UNIONS

Northern Counties Technical Examinations Council's Basic Craft Certificate in Hairdressing. The standard of this examination corresponds to that of the C.G.L.I. Basic Craft Certificate. It is taken after a three-year part-time course for hairdressing apprentices. A Certificate of Competency in Practical Work is awarded in the second year and must be obtained before the final Basic Craft Certificate can be granted. The syllabus covers

the same subjects as the C.G.L.I. course, and includes English and Business Studies as non-examination subjects. Candidates may take ladies' and men's hairdressing papers in the same examination period if they wish.

HEALTH AND PUBLIC HEALTH

Public Health Inspectorate. The maintenance of public health is the duty of local government. The Public Health Inspectorate forms part of the Public Health Department of a local health authority.

The necessary qualification for posts in the Public Health Inspectorate is the Diploma of the Public Health Inspectors Education Board, 90, Buckingham Palace Road, London, S.W.1 (*see below*). Additional examinations may be taken by Inspectors in smoke inspection, health engineering and tropical hygiene and are conducted by the Royal Society of Health (*see below*). The Royal Society of Health also conducts examinations for Inspectors of Meat and Other Foods.

Sanitary Inspectors in Scotland are examined by the Royal Sanitary Association of Scotland for a Certificate of Competency (*see below*). The Association also conducts an examination for Inspectors of Meat and Other Foods.

Note. The postgraduate Diploma in Public Health (D.P.H.) (*see page 818*) is a necessary qualification for Medical Officers of Health.

The Royal Society for the Promotion of Health

90, Buckingham Palace Road, London, S.W.1

The Royal Society of Health was founded in 1876 to promote the health of the people. It is an examining body for public health officials and it is the largest society of public health and other health workers in the world.

Fellows (F.R.S.H.) are elected by the Council of the Society from among Members and Licentiate Members of at least three years' standing who are either (i) eminent men of science; (ii) persons of distinction as legislators or administrators; or (iii) have done noteworthy work in connection with the promotion of health. The number that may be elected each year is strictly limited.

Members (M.R.S.H.) are required to have certain qualifications specified by the Council of the Society.

Licentiate Members (L.M.R.S.H.) are elected at the discretion of the Council of the Society from among persons holding senior positions directly or indirectly relating to health.

Associate Member (formerly Associate) (A.M.R.S.H.) (formerly A.R.S.H.). Associates are required to have certain qualifications specified by the Council of the Society.

Affiliates (Affil.R.S.H.) are persons interested in promoting all or any of the Society's objects but not qualified for Membership or Associateship or necessarily holding senior positions.

DIPLOMAS AND CERTIFICATES AWARDED BY THE ROYAL SOCIETY OF HEALTH

Examinations for officers of the public health service and others were started in 1877 and at present the following examinations are conducted in Britain.

Diploma in Food Hygiene. For stewards of institutions, butchers, food traders, abattoir assistants and others.

Diploma in Health and Welfare Administration. For those engaged in a clerical or administrative capacity in the department of the Medical Officer of Health of a local health authority.

Diploma in Health Engineering. For architectural assistants, assistants in municipal engineers' and surveyors' departments, water department employees, public health engineers, health officers, builders, clerks of works and others interested in environmental hygiene.

Diploma for Nursery Nurses. An examination held in conjunction with the Association of Nursery Training Colleges for students who have obtained the certificate of a college affiliated to the Association. The examination is also open to persons who have obtained the Certificate of the National Nursery Examination Board and have taken a course of training in approved residential nurseries.

Diploma in Nutrition in Relation to Catering and Cooking. An advanced examination for food supervisors, hospital catering officers, managers and others engaged in large-scale catering and cooking.

Diploma in Public Health Inspection for General Overseas Appointments. For candidates training to be public health inspectors overseas.

Diploma in School Hygiene. For teachers, students at colleges of education and others.

Diploma for Smoke Inspectors. For candidates wishing to undertake the practical and administrative duties of smoke inspectors.

Diploma in Tropical Hygiene. For public health inspectors who have had experience in tropical countries.

Certificate in the Hygiene of Food Retailing and Catering. For those engaged in the food and other catering or kindred trades or in the associated wholesale or retail distributive trades. In addition to a general section there are options in bakery, grocery, ice cream, meat and meat products, or milk and milk products.

Certificate for Health Visitors. For women training to be health visitors in England and Wales.

Certificate for Health Visitors and School Nurses. For women training to be health visitors and school nurses outside England and Wales.

Certificate in Meat Inspection. For candidates wishing to qualify for appointment as an authorised officer under the Food and Drugs Act to act in relation to the examination and seizure of meat, but who are not necessarily public health inspectors.

Certificate in Nutrition in Relation to Catering and Cooking. For food supervisors, hospital catering officers, managers and others engaged in large-scale catering and cooking.

The Public Health Inspector's Diploma for England and Wales is awarded by the Public Health Inspectors Education Board. The administration of the examination and the work of the Board, together with that of the Public Health Inspectors Registration Board, are carried out by the Royal Society of Health.

Candidates must follow a four-year course of instruction (organised on a part-time day-release or block-release or sandwich basis) approved by the Board at a technical college. After they have been accepted by a local health authority for practical training and by a college for theoretical instruction they must register with the Public Health Inspectors Registration Board as pupil public health inspectors.

During the course of training and instruction the Education Board conducts the following examinations:

- A First Examination at the end of the first year of training;
- An Intermediate Examination at the end of the second year of training;
- A Third Examination at the end of the third year of training;
- and
- A Final Examination at the end of the fourth year of training.

Admission to the second, third and fourth years of training depends on the results of the candidate's performance in the First, Intermediate and Third Year Examinations.

The minimum entry requirement for admission to a course of training and instruction is four G.C.E. 'O' level passes (or the equivalent), including English Language, Mathematics or Mechanics or Technical Drawing, Physics or Chemistry or General Science or Chemistry with Physics, or Biology or Building Science or Engineering Science, and an optional subject.

Candidates may be admitted to the Final Examination at any age but they must be 21 before they may receive the Diploma.

COURSES OF THEORETICAL INSTRUCTION

Courses of theoretical instruction are provided at the following establishments:

Four-year Day-release Courses

Belfast College of Technology; Birmingham, Matthew Boulton Technical College (first and second years) and Birmingham College of Advanced Technology (third and fourth years); Blackpool Technical College and School of Art; Bradford Technical College; Cardiff, Llandaff Technical College (first and second years) and Welsh College of Advanced Technology (third and fourth years); Hull College of Technology; Leeds College of Technology; Liverpool, College of Building (first and second years) and University School of Hygiene (third and fourth years); South-East London Technical College; Newcastle upon Tyne College of Further Education; Nottingham and District Technical College; St. Albans, Hertfordshire College of Building; Salford, Technical College (first and second years) and Royal College of Advanced Technology (third and fourth years); Sheffield College of Technology; Stoke-on-Trent College of Building; Tottenham Technical College.

Four-year Block-release Courses

Bristol Technical College; South-East London Technical College; Tottenham Technical College.

Four-year Sandwich Courses

Birmingham College of Advanced Technology; Stoke-on-Trent College of Building.

Three-year Sandwich Courses

Salford Royal College of Advanced Technology; Tottenham Technical College.

The Society also awards a **Certificate in Parentcraft and Home Management** (instituted in 1965) after an evening course of instruction for married couples and single men and women. At present, courses are available in eight colleges of further education.

The Royal Sanitary Association of Scotland

185, St. Vincent Street, Glasgow

The objects of the Association include the promotion of sanitary science in all its branches and the conducting of examinations in sanitary science.

Member. Membership of the Association is open to those interested in its objects. A Member holding the Certificate of the Association, whether in sanitary science, meat inspection or health visiting, is entitled to the designation M.R.San.A.

EXAMINATIONS

Certificate of Competency for Sanitary Inspectors in Sanitary Science, Sanitary Law, Sanitary Administration and Food Inspection. Candidates must have one S.C.E. Higher grade pass and three Ordinary grade passes (or the equivalent) in subjects chosen from among English (compulsory), History, Geography, Mathematics, a science subject and a technical subject. The syllabus covers Sanitary Science, Engineering, Law and Administration, Building Construction, supervision and specifications, principles of plumbing, milk production and distribution, food hygiene and clean air. Courses of instruction are available at the following establishments:

Robert Gordon's Technical College, Aberdeen; Dundee Technical College; Heriot-Watt College, Edinburgh; Cambuslang School of Building, Lanarkshire.

Certificate in the Inspection of Meat and other Foods. Candidates must be at least 21 and have reached a satisfactory level of education. They must have taken an approved two-year part-time course of training in the inspection of meat and other foods and have completed a minimum of 30 hours' training in an abattoir. The subjects of the examination are the relevant legislation and regulations and the techniques of inspection.

The Royal Institute of Public Health and Hygiene

(incorporated 1929)

28, Portland Place, London, W.1

Fellow (F.R.I.P.H.H.). Fellowship is restricted to registered medical practitioners interested in the advancement of Public Health, Occupational Health and Hygiene; but others, distinguished in other branches of medical science and interested in the advancement of Public Health, Occupational Health and Hygiene, may be elected at the discretion of the Council of the Institute.

Member (M.R.I.P.H.H.). Ordinary Membership is restricted to holders of recognised university degrees or diplomas, members of the dental profession, persons holding certain professional qualifications, administrative officers in public health departments, hospital boards or executive councils and holders of the Institute's Diploma.

Associate (A.R.I.P.H.H.). Persons who are not less than 18 and have passed an examination for a certificate of the Institute or hold qualifying diplomas conferred by bodies recognised by the Institute. (Associates already in membership may designate themselves A.R.I.P.H.H. but no Associates are in future to be entitled to use designatory letters.)

EDUCATIONAL COURSES

Three-day full-time courses are held at the Institute, and part-time courses are held at many centres throughout the British Isles in the subject of Food Hygiene and the Handling of Food. These courses terminate with a Certificate Examination.

Courses leading to the Diploma Examinations in Bakery Hygiene, Meat and Poultry Hygiene and Canning Hygiene are held at the Institute.

Attendance at these courses and examinations is restricted to holders of the Certificate in Food Hygiene and the Handling of Food.

Part-time courses leading to the Certificate and Diploma Examinations in Mortuary Hygiene and Technology are held in London at various dates throughout the year.

EXAMINATIONS

Examinations for the Certificate and Diploma of the Institute are held in London and at many other centres in the following subjects:

Certificate Examinations are held in the following subjects:

Food Hygiene and the Handling of Food; General Hygiene;

Mothercraft and Child Welfare; School Hygiene; Mortuary Hygiene and Technology.

Diploma Examinations are held in the following subjects:

Bakery Hygiene; Canning Hygiene; Dairy Hygiene; General Hygiene; Meat and Poultry Hygiene; Mothercraft and Child Welfare; School Hygiene; Mortuary Hygiene and Technology.

POSTGRADUATE MEDICAL SCHOOL

Courses of instruction, which may be taken whole or part-time, are conducted by the Institute for postgraduate medical students, leading to the examinations for the Diploma in Public Health and the Diploma in Industrial Health of the Conjoint Board of the Royal Colleges of Physicians and Surgeons and for the Diploma in Industrial Health of the Society of Apothecaries.

Institute of Health Education

35, Victoria Road, Sheffield, 10, Yorkshire

The Institute is a professional body for people engaged in health education; its membership is drawn from among doctors, nurses, sociologists, journalists and others whose work is connected with health education.

Fellow (F.I.H.E.). Fellowship may be conferred by the Institute on those who have done outstanding work in health education.

Members (M.I.H.E.) are (i) persons employed full-time in health education who hold a recognised professional qualification or who, by virtue of their experience, satisfy the Institute that they understand the principles of health education and are competent to undertake its practice; or (ii) Associate Members of five years' standing who satisfy the Institute that they are competent to undertake the practice of health education.

Associate Members (A.I.H.E.) are persons not engaged full-time in health education but who hold a professional qualification in an appropriate field and who spend part of their professional time in health education work.

Other classes of Membership are Affiliate Members; Corporate Members (organisations or groups); Honorary Life Members.

The Institute of Sewage Purification

49/55, Victoria Street, London, S.W.1

(i) CORPORATE MEMBERS

Corporate Fellows (F.Inst.S.P.) are persons whom the Institute especially desires to honour and who have done noteworthy work in connection with sewage purification. Only Corporate Members of the Institute are eligible for election to Corporate Fellowship.

Members (M.Inst.S.P.) must have received a good general and technical education; must have been regularly trained or had sufficient practical experience and have held for three years and still hold a full-time, responsible post mainly concerned with sewage works management, operation or maintenance; or sewage works design; or river pollution prevention; or trade effluent treatment and inspection; or research on associated problems; or must possess other acceptable qualifications.

Associate Members (A.M.Inst.S.P.) must have received a good general education; must have held for three years and still hold a full-time post connected with the work described above; and must have passed the Associate Membership examination or exempting examinations or possess other acceptable qualifications.

(ii) NON-CORPORATE MEMBERS

Non-Corporate Fellows (F.Inst.S.P.) are persons, not in membership of the Institute, whom it especially wishes to honour.

Honorary Member (Hon.M.Inst.S.P.). The Institute may elect to Honorary Membership persons interested in the subjects outlined under 'Corporate Members' above.

Affiliate. The Institute may elect to Affiliateship persons who are interested in these subjects and whom it considers desirable to associate with itself but who are not eligible for Corporate Membership. The former class of Associateship (A.Inst.S.P.) is now closed.

Students must be at least 16 and must hold a relevant full-time appointment; they may be required to pass examinations set by the Institute. Students may not remain in the grade for more than five years or beyond the age of 26.

(iii) EXAMINATIONS

The Institute may examine candidates for admission to Associate Membership or Studentship; candidates are admitted to Membership by personal interview or on otherwise satisfying the Institute that they are properly qualified.

HORSE RIDING INSTRUCTION

QUALIFICATIONS AWARDED BY THE BRITISH HORSE SOCIETY: 16, Bedford Square, London, W.C.1

All examinations are practical and oral with written sections.

Assistant Instructor's Certificate. Candidates must be at least 17½ years old. The subjects of the examination are equitation; stable management and horsemanship; elementary minor ailments; instruction techniques.

Instructor's Certificate (B.H.S.I.). Candidates must be at least 20 years old, hold the Assistant Instructor's Certificate and have had one year's experience as an assistant instructor. The examination is in equitation; instructing ability; horse training; horsemastership and stable management; general knowledge; minor ailments.

Fellowship of the British Horse Society (F.B.H.S.). This examination is open to people who are at least 25 years old, hold the Society's Instructor's Certificate, and have had two years' experience as instructor. The examination covers equitation and training the horse; ability in instructing; and an essay on equitation or training or instruction.

HOSPITAL ADMINISTRATION

The Institute of Hospital Administrators

75, Portland Place, London, W.1

Fellow (F.H.A.). Election to Fellowship is open to Associates of the Institute who possess further qualifications, including at least five years' service in an approved senior administrative position.

Associates (A.H.A.) are those who have passed the Final examination of the Institute, are not less than 21 and have been in approved hospital administrative service for not less than five years. Associates are entitled, after election to the grade, to call themselves 'Incorporated Hospital Administrators'.

Registered Student. Admission to the Institute's Register of Students is open to candidates, not less than 16 years of age, who have at least five G.C.E. 'O' level passes, including English. The four other subjects may be any academic subjects, provided they are not overlapping subjects, such as General Science and Chemistry or Botany and Biology.

THE INSTITUTE'S EXAMINATIONS

There are two examinations, Intermediate and Final, admission to which is limited to Registered Students. No candidate may take the Final examination without having completed the prescribed period in approved hospital administrative service.

The Intermediate Examination consists of papers in Public Administration, Elements of Economics, General Principles of Law and the Social Services. Candidates with G.C.E. 'A' level passes in corresponding subjects may be exempted from individual papers. Graduates and candidates with approved professional qualifications may be allowed to go straight to the Final examination.

The Final Examination is in three parts, which must be taken in order and from which no exemptions are granted. Except for those candidates who offer Accountancy in each part of the examination, all candidates must take Hospital Administration in each part together with two optional subjects chosen, subject to certain regulations, from the following list:

Accountancy Parts I, II and III; General Law affecting Hospitals; Statistics; Hospital Supplies; Law relating to the treatment of mental disorders; Medical Records; Principles and Practice of Investment; Principles of Hospital Planning, Construction and Equipment; Personnel Management; Cost Accounts.

HOUSECRAFT

The National Institute for Housecraft (Employment and Training) Ltd.

Boston Manor House, Boston Manor Road, Brentford, Middlesex

The main object of the Institute, which was established in 1946, is to raise the status of domestic employment.

Associate Members. Holders of the Diploma of the Institute are called Associate Members of the National Institute of Housecraft and are classified as follows:

Trained Adults who have completed six months' full-time training.

Pre-Diploma Workers who have taken an eight-month full-time course of training and have then completed their training in employment for a year as Pre-Diploma Workers.

Working Housekeepers who have completed 13 weeks' full-time training in preparation for private employment or work in small hotels or institutions.

Forewomen who, in addition to experience in employment, take a short course of training and qualify by examination for group responsibility.

Experienced Workers in private houses or small institutions who reach the standard required for the Diploma.

Home helps employed by local health authorities.

The Diploma of the National Institute for Housecraft is awarded to those who satisfy the Institute's examining board as to their qualifications and suitability for domestic employment. The examination is intended to assess not only candidates' practical proficiency but also their personal qualities and general ability.

For trained adult candidates (i.e. students over 17 who have taken a recognised course of training for the Full Diploma Award) the examination consists of a six-hour practical test representing the day-to-day work done in the average household, the assessment of work done during the course, a short written questionnaire on general housecraft and an interview.

For students under 17 when they begin their training the examination is divided into two parts. The Diploma Part I examination is taken at the end of training and the Diploma Part II examination for the Full Diploma Award is taken at the end of the pre-Diploma year in employment.

Training. A few training places can be provided at the Institute's residential Training Centres at Boston Manor, Brentford, Middlesex, and at Dan-y-Coed, Mumbles Road, Swansea. In Scotland training for the Diploma is provided by the Scottish Association for Homecraft Training at Uplands, Bridge of Allan.

Two types of course are available at these centres. The course for students between the ages of 15 and 17 lasts eight months and leads to the Diploma Part I examination. After a further period of in-service training in employment students take the Part II examination, leading to the Full Diploma Award. The course for students of 17 and over lasts six months and leads to the full Diploma examination.

Training may also be provided by local education authorities in secondary schools and colleges of further education. Candidates must have reached the age of 16 by the end of the term in which they take the Part I examination.

All these courses of training for the Diploma consist of practical training, selected practice and general education.

Other courses of training leading to the award of the Diploma are provided for domestic forewomen, working housekeepers and home helps. Intensive short courses may be arranged for experienced workers who wish to become forewomen, intensive 13-week courses for experienced workers who wish to become working housekeepers and short courses of training for home helps.

HOUSING MANAGEMENT

Housing managers work for housing associations, local authorities or public or private trusts, collecting rents, controlling lettings, supervising repair work and dealing with any social problems which may arise.

The Institute of Housing Managers

Victoria House, Southampton Row, London, W.C.1

The Institute is an amalgamation of the Society of Housing Managers and the Institute of Housing.

Fellow (F.I.H.M.). A Fellow must be at least 30 years old, have had at least four years' approved experience, and have been an Associate either of the Institute or of the former Institute or Society for at least seven years.

Professional Associate (A.I.H.M.). An Associate must be at least 21 years old, have had two years' approved experience and have passed one of the following examinations:

The Final examination of the former Institute (now discontinued); the Diploma in Housing Management of the Housing Management Examination Board; the full professional examination of the Royal Institution of Chartered Surveyors (*see* Surveying, page 996); the B.Sc. in Estate Management of London University (*see* page 458).

Licentiate. People who were elected as students for the Licentiate-ship of the former Institute before 1st April, 1965, may apply to the Council for election as Licentiates.

Affiliate. An affiliate is either one who is at least 30 years old and has had five years' experience of housing work or has been a Registered Student for ten years; or a Licentiate who wishes to become an Affiliate; or a former member no longer permanently engaged in housing work.

Registered students must fulfil the conditions for entry to the examinations for the Diploma in Housing Management (*see below*).

EXAMINATIONS OF THE INSTITUTE

The Diploma in Housing Management of the Housing Management Examination Board. Candidates for the Diploma must have been Registered Students of the Institute of Housing Managers for at least 16 months. Registered Students must be at least 17 years old and undertaking study by evening and correspondence courses while working in a housing department. Older candidates are also considered.

To be eligible to enter for the Diploma examinations a candidate must have had at least 16 months' experience in a housing department supplemented by study (the normal length of training is 18 months for graduates and holders of social science diplomas and certificates, two years for other candidates over 20 years and three years for younger candidates). They must be at least 18 years on entering for the Intermediate examination and should hold four G.C.E. or S.C.E. 'O' level passes, or two at 'A' and one at 'O', or three at 'A' level, in each case including English Language (or S.C.E. English), Mathematics or an approved science subject (Biology is not approved). Candidates with any six 'O' level G.C.E. or S.C.E. passes, or any three 'A' level passes may be considered. The Diploma is taken in two parts:

Intermediate Examination. This covers construction and maintenance of buildings; central and local government; estate records and accounts; elements of English Law; law of housing and public health; principles of administration; sanitation and services.

Final Examination. This includes construction and maintenance of buildings; housing finance; law of landlord and tenant; law of housing and planning; social welfare; housing management and administration (2 papers).

QUALIFICATIONS AWARDED BEFORE THE AMALGAMATION OF THE SOCIETY OF HOUSING MANAGERS WITH THE INSTITUTE OF HOUSING (1965)

(i) MEMBERSHIP OF THE SOCIETY OF HOUSING MANAGERS

Fellow (F.S.H.M.). Fellows were Ordinary Members who had held a post of responsible management for at least seven years, and were at least 30 years old.

Ordinary Member (M.S.H.M.). Candidates were required to have had at least two years' approved office experience (18 months for graduates) and to have passed an approved examination. Ordinary members were at least 21 years old.

(ii) MEMBERSHIP OF THE INSTITUTE OF HOUSING

Fellow (F.I.Hsg.). Fellows were Associates of at least five years' standing who had had at least two years' approved experience.

Associate (A.I.Hsg.). An Associate was required to be at least 21 years old, have had at least three years' approved experience, and have passed the Final examination of the Institute or some other approved examination.

INDUSTRIAL SAFETY

The Institution of Industrial Safety Officers

Massey House, Vandon Street, London, S.W.1

Honorary Members and Honorary Fellows are persons whom the Institution considers worthy of special honour.

Fellows are members of the Institution who are, or have been, engaged in industry and have distinguished themselves in the practice of industrial accident prevention and have obtained prescribed qualifications.

Members must be at least 21 years of age and have been employed in industrial accident prevention in industry for at least two years, or for a period of at least one year and have attended a course run by the Royal Society for the Prevention of Accidents. In addition, they must, if under 35 years of age, pass the Institution's examination or, if more than 35 years of age, pass the examination or parts of it or submit a thesis.

Associates are persons not otherwise qualified to be elected to a membership grade but having some knowledge of industrial accident prevention.

Students must be at least 16 years of age and be intending to seek admission to the grade of Membership.

INDUSTRIAL SUPERVISORS

The Institute of Industrial Supervisors

24, Albert Street, Birmingham, 4

Fellows (F.I.I.S.) are corporate members who have achieved a management position above supervisory level and have delivered to

a meeting of the Institute, or had published in one of the Institute's publications, a paper of acceptable standard.

Corporate Members (M.I.I.S.) must have passed an approved examination and have for at least seven years held a supervisory position of substance; or alternatively give proof of technical and executive knowledge and for at least 10 years have had a supervisory position of substance.

Associate Members (A.M.I.I.S.) must have passed an approved examination and for at least four years have held a supervisory position; or alternatively give proof of technical and executive knowledge and have held for at least seven years a supervisory position.

Associates (A.I.I.S.) have not the necessary qualifications for Membership or Associate Membership but have received a good general education and executive training, and have been engaged in administrative or technical capacity complementary to supervision.

Graduates (Grad.I.I.S.) must have passed a prescribed examination or have held a supervisory position for three years.

Students must satisfy the Council that they desire to engage in the practice of supervisory management and are studying for the examination required for admission to Graduateship of the Institute.

Approved examinations are the Foremanship and Supervision Certificate of the British Institute of Management and the General Certificate of Supervisory Studies awarded by National Examinations Board in Supervisory Studies.

There are certain college courses and company training and education schemes that are approved.

INSURANCE AND ACTUARIAL WORK

The Chartered Insurance Institute

The Mall, 20, Aldermanbury, London, E.C.2

Fellows (F.C.I.I.) must complete all four parts of the Institute's examination, comprising 16 subjects.

Associates (A.C.I.I.) must complete Part A and seven subjects from Part B.

EXAMINATION

The Institute's Examination is in four parts. Part A comprises

three subjects; Part B, four subjects; Part C, five subjects in any one of five alternate groups (general, fire, accident, life and marine); and Part D, which is open only to members, four parts.

Exemption from certain subjects may be granted to candidates with 'A' level passes in these or comparable subjects.

For entry to these examinations students must have obtained either:

- (i) Passes in the Institute's Preliminary Examination in English and four other subjects from Mathematics, History, Geography, French, Chemistry, Physics and Elements of Accounting or in English, Mathematics and two other subjects.
- (ii) G.C.E. or S.C.E. 'O' level passes in English or English Language, Mathematics and two subjects from English Literature, Geography, History, Foreign languages, Natural Sciences, Economics, British Constitution, Surveying and one commercial subject or English and English Language and four other subjects including not more than one technical craft or commercial subject. An 'A' level G.C.E. or S.C.E. pass will be accepted as equivalent to two 'O' level passes.
- (iii) A National Certificate or Diploma in Business Studies.
- (iv) The Scottish Senior Certificate in Commercial Subjects.

The Corporation of Insurance Brokers

15, St. Helens Place, London, E.C.3

Fellowship (F.C.I.B.) and Associateship (A.C.I.B.). A Principal, that is, an owner of a firm, may be elected as a Fellow if he has practised as an Insurance Broker for at least five years or as an Associate if he has had at least three years' Insurance experience.

Associate Membership. A member of a broker's staff may be elected as an Associate Member. Associate Members must normally qualify before election by taking the examination for the Associateship of the Chartered Insurance Institute in the general branch group.

The Chartered Institute of Loss Adjusters

11a, Union Court, Old Broad Street, London, E.C.2

Fellows (F.C.I.L.A.) must be at least 35 years of age and have been Associates for at least five years, and be principals or senior assistants.

Associates (A.C.I.L.A.). Members who have passed the Final examination and are at least 27 years old and have been in practice for five years are eligible for election as Associates.

Licentiates (L.C.I.L.A.) are persons who are elected, having passed the Institute's Intermediate examination.

Students must be at least 18 years old, have passed, or obtained exemption from, the preliminary examination of the Chartered Insurance Institute, and be serving as assistants in approved loss adjusters' offices.

THE INSTITUTE'S EXAMINATIONS

The Intermediate Examination consists of subjects from Parts A and B of the qualifying examination of the Chartered Insurance Institute.

The Final Examination covers insurance law and claims procedure, report writing and the adjustment of various kinds of losses such as agricultural, building, burglary and third party claims.

The Association of Average Adjusters

12, Great James Street, Bedford Row, London, W.C.1

Candidates for **Membership** must serve with a Member of the

CORPORATION OF

CIB

INSURANCE BROKERS

standards must matter

Insurance is a basic necessity and wise advice essential. You get both when you use an Insurance Broker who is a member of the Corporation of Insurance Brokers.

Standards must matter to an **Incorporated** Insurance Broker. His skilled advice is available to you at no extra cost.

List of members from: Corporation of Insurance Brokers
15 St. Helen's Place, Bishopsgate, London, E.C.3

Association either for at least eight years if not articulated or for a period of three to five years under articles, the length depending on the candidate's educational attainments.

The Association's examinations are taken at the end of this period; the candidate undertakes to start practice exclusively as an Average Adjuster in the United Kingdom within two months of his election as a member.

Further information may be obtained only from the Secretary of the Association.

Institute of Actuaries

Staple Inn Hall, High Holborn, London, W.C.1

Fellowship (F.I.A.) is gained primarily by examination.

Associateship (A.I.A.) is also gained by examination.

EXAMINATIONS

The examinations consist of a Preliminary Examination in Mathematics and three subsequent examinations: Intermediate, Associateship and Fellowship. Tuition is arranged by the Institute and is mainly by correspondence.

The minimum requirements for entry to these examinations are G.C.E. passes in 5 subjects including 2 at 'A' level, one of which must be at Grade C or above in a mathematical subject. English Language or Literature must also be passed at least at 'O' level.

Fellowship Examination. There are seven subjects, the candidate being given a choice as set out below:

- (i) Finance and Investment (including Reversions).
- (ii) Life Offices—Ordinary and Industrial (less advanced level).
- (iii) Life Offices—Ordinary and Industrial (more advanced level).
- (iv) Pension Funds and Friendly Societies (less advanced level) and Social Insurance Schemes.
- (v) Pension Funds and Friendly Societies (more advanced level) and Social Insurance Schemes.
- (vi) More Advanced Statistics.
- (vii) Finance and Investment (more advanced level).

To be successful, candidates must pass in subjects (i), (ii) and (v) *or* subjects (i), (iii) and (iv) *or* subjects (i), (ii), (iv) and (vi) *or* subjects (ii), (iv) and (vii).

Associateship Examination. There are six papers, of three hours each, covering the following subjects:

- (i) Life and other contingencies.
- (ii) Statistics.
- (iii) Mortality and other investigations and Demography.
- (iv) Finance and Investment.

Intermediate Examination. This consists of two papers on Probability and Finite Differences; one on Statistics; and two on Compound Interest.

Exemption from the Preliminary Examination is granted to students who obtain prescribed high grades in a G.C.E. 'A' level Mathematics paper. Exemption is also given for a first or second class Honours degree in Mathematics or Statistics.

Exemption from the Institute's papers in Statistics is granted to candidates who hold a postgraduate diploma in Statistics. An Honours degree in Statistics or Mathematics where the course includes some study of statistics will often give some exemption, while an Honours degree in Economics may give exemption from Associateship subject (iv) Finance and Investment.

Certificate in Finance and Investment of the Institute of Actuaries. The Council will issue a special certificate, on application, to any Student or Associate who has passed the following examinations:

Intermediate (1) Statistics.

Intermediate (2) Compound Interest.

Associateship (3) Finance and Investment.

Fellowship (4) Finance and Investment (less advanced level) excluding Life Interests and Reversions.

Fellowship (5) Finance and Investment (more advanced level).

The Faculty of Actuaries

23, St. Andrew Square, Edinburgh

Honorary Fellow (Hon.F.F.A.). Anyone who has attained distinction in mathematical, statistical or financial subjects, or who has rendered outstanding service to the Faculty may be elected an Honorary Fellow. A Fellow of long standing, retiring from the profession, may also be elected.

Fellows (F.F.A.). Any student of the Faculty who has passed the examinations and reached the age of 23 years may be admitted a Fellow.

Associates (A.F.A.). Those who have passed the examinations and have reached the age of 21 years may be admitted as Associates and then Fellows when they are 23.

EXAMINATIONS

Applicants for the Faculty's Examinations must be supported by the recommendation of two Fellows of the Faculty and must have passed either:

- (i) S.C.E. in three subjects on the Higher Grade including English and Mathematics (Grade A) or, alternatively, sufficient subjects (on the Higher Grade) including Mathematics (Grade B) and English.
- (ii) An approved equivalent qualification.

The qualifying examinations are divided into four Parts; Part IV is divided into two sections.

Exemption. Mathematics graduates (Hons. First or Second Class) of an approved university may gain exemption from Part I. Exemption from one subject in Part I may be granted to students who have studied Mathematics for two years during a degree course.

(Tuition for the examinations of the Institute of Actuaries and the Faculty of Actuaries is available through correspondence courses of the Actuarial Tuition Service, run jointly by these two bodies.)

Institute of Automobile Assessors

52/53, Jermyn Street, London, S.W.1

(Members must not be in any way connected with the Motor Trade.)

(i) CORPORATE MEMBERSHIP

Fellows (F.Inst.A.A.) are elected in recognition of services to the Institute or the profession.

Members (M.Inst.A.A.) are elected for their seniority from among Associate Members.

Associate Members (A.M.Inst.A.A.) must have had at least one year's professional experience and must have passed section C of the Institute's examination.

(ii) NON-CORPORATE MEMBERSHIP

Graduates (Grad.Inst.A.A.) must have completed an apprenticeship or other approved training in Automobile Engineering, and must have passed or gained exemption from section A and have passed section B of the Institute's examination. They must be engaged in the profession of Assessing.

Associates (A.Inst.A.A.) are those engaged in Assessing who

are not eligible for other grades of membership.

Students must have completed an apprenticeship or other approved training in Automobile Engineering.

(iii) HONORARY MEMBERSHIP

The Institute also elects **Honorary Fellows (Hon.F.Inst.A.A.)**.

(iv) THE INSTITUTE'S EXAMINATION

The qualifying examination is divided into three parts and is open to registered Students of the Institute. Students who pass sections A and B qualify for Graduateship of the Institute; students successful in section C are eligible, on fulfilling the other requirements, for admission to Associate Membership of the Institute. The sections must be taken in order, and cover the following subjects:

Section A: English to include report writing; Mathematics; Mechanics; Engineering Drawing. These papers are approximately at the standard of G.C.E. 'O' level, and subject-for-subject exemption may be given for G.C.E. or equivalent passes.

Section B: Automobile Engineering; Workshop Technology; one paper on (a) Accident reconstruction and road research, (b) Motor Vehicle Legislation, Contract and Arbitration Law, (c) Estimating, Costing and Valuations; general principles and practice of Automobile Assessing.

Section C: Motor Insurance.

UNIVERSITY DEGREE AND DIPLOMA

Nottingham. B.A. in Industrial Economics: as from October 1966 Insurance will be included in the course as an optional subject for the Part II examination.

Diploma in Actuarial Mathematics of the University of Edinburgh. A one-year postgraduate course leads to this qualification.

JOURNALISM

The Institute of Journalists

2 and 4, Tudor Street, London, E.C.4

Fellows are elected for outstanding service to journalism.

A Member must be at least 21 years old and should either have

been professionally engaged in full-time journalism for at least three years; or he should hold a Diploma or other qualification in journalism (*see below*), or a University degree, or have taken a term of pupilage in journalism provided that in each of these cases he has at least one year's practical experience.

A Probationary Member is one who is 21 and is qualified for Membership except that he has worked in journalism for less than three years.

A Junior Member must be at least 16 years old but under 21, and undergoing preparation for Membership.

An Associate must be at least 21 years old and in work related to journalism.

The National Council for the Training of Journalists

6, Carmelite Street, London, E.C.4

The National Council administers an apprenticeship scheme for entrants to newspaper journalism. Trainees are selected by newspaper editors and serve a probationary period of six months. The successful probationers are then indentured for three years' practical training, during which they are expected to take G.C.E. 'A' level in English and 'O' level in Central and Local Government, a speed certificate in Shorthand, and part-time courses in general subjects and newspaper law. At the end of the apprenticeship they take a **Proficiency Test** conducted by a panel of newspaper men and including oral and written examinations on journalism, law and current affairs. Graduates may take this test after two years' indentured training.

A Certificate of Proficiency is awarded to successful candidates who then take an 18-month part-time course for the Council's National Diploma.

National Diploma in Journalism. Entry to this course is open to holders of the Certificate of Proficiency and to experienced journalists in trade, technical, magazine and periodical fields. Graduates would not be expected to go on to this course. The Diploma course covers a wide range of journalism subjects and law relating to journalism, and may be taken by evening or day-release class or by correspondence course.

A number of commercial colleges offer their own courses in journalism, not usually leading to any qualification. None of these courses gives exemption from any part of the National Training Council's Certificate and Diploma.

LABORATORY TECHNICIANS AND ASSISTANTS

The Institute of Science Technology

106, Hampstead Road, London, N.W.1

Fellows (F.I.S.T.) are elected. They must be Associate Members of at least two years' standing and at least 25 years of age. They are elected on a basis of professional skill, knowledge, administrative ability and length of service. They may be elected as a result of a special examination or after submission of a thesis or dissertation.

Associate Members (A.I.S.T.) have normally passed the Science Laboratory Technician's Advanced Certificate. Where the syllabus is not suitable for specialised work, the Institute provides, as an alternative, a **Specialised Diploma Examination** in a particular subject. The examination is open to all ordinary members.

Other qualifying examinations for Associateship are: an appropriate H.N.C.; appropriate C.G.L.I. Final or Advanced Certificate; Final Certificate of the I.M.L.T. Modified examinations are offered to outstanding applicants of at least 30 years of age.

Ordinary Members are normally required to have passed the Science Laboratory Technician's Ordinary Certificate (awarded jointly by the C.G.L.I. and the Institute).

Other qualifying examinations are: O.N.C.; certain C.G.L.I. intermediate certificates; two 'A' level passes in science subjects plus courses in laboratory materials and equipment; Intermediate Certificate of the I.M.L.T., Associateship of Animal Technician's Association.

A further alternative is the Institute's **Endorsed Certificate of Technical Competence** (conducted by the C.G.L.I.). Also, technicians with at least 10 years' approved experience without examination qualifications are admitted to Ordinary Membership.

Registered Students are normally not less than 16 years of age and engaged in full-time laboratory work. It is preferred that candidates should have 'O' level passes in a number of subjects.

The Institute of Medical Laboratory Technology

74, New Cavendish Street, London, W.1

See note on State Registration, page 790

Fellowship (F.I.M.L.T.). To become a Fellow a candidate

may take a further subject or subjects at the Final examination described below, or submit a dissertation or thesis on an approved subject.

Honorary Fellows are elected to the Institute for distinguished work in a related field.

Associate (A.I.M.L.T.). Training for the qualification is by part-time study combined with employment in a hospital, public health or other laboratory recognised by the Institute. Part-time classes are available at some technical colleges.

For **Student membership** of the Institute the requirements are either (i) four G.C.E. 'O' level passes including English Language, Mathematics and two approved science subjects; or (ii) four S.C.E. Ordinary Grade passes including English, Mathematics and two approved science subjects. Some exemptions from the Institute's examinations are granted to those who have 'A' level G.C.E. (or S.C.E.) passes in science subjects, the Associateship of the Royal Institute of Chemistry, a science degree or O.N.C. or H.N.C. in Chemistry.

THE INSTITUTE'S EXAMINATIONS

The Intermediate Examination of the Institute is taken after three years' training in a laboratory (or two years if the candidate holds two 'A' level G.C.E. passes or four Higher Grade S.C.E. passes including two in science subjects). The examination is written, practical and oral.

On passing the Intermediate a student is granted the ordinary membership of the Institute, provided that he is at least 19 years old.

The Final Examination may be taken at the end of a further two years' experience after passing the Intermediate; the Final is taken in one of the following subjects: Bacteriology, Chemical Pathology, Histopathology, Parasitology, Virology, or Haematology and Blood Transfusion. When he has passed the Final a candidate is accepted as an Associate of the Institute and is qualified for State Registration by the Medical Laboratory Technicians' Board.

CITY AND GUILDS OF LONDON INSTITUTE EXAMINATIONS

The C.G.L.I. conducts the following examinations:

Science Laboratory Technician's Certificate (Subject No. 119). (Certificates and Advanced Certificates are awarded.)

Chemical Technician's Certificate (Subject No. 315).

EXAMINATIONS OF THE REGIONAL EXAMINING UNIONS

The various Unions conduct courses for the Chemical Technician's Certificate.

LAUNDRY MANAGEMENT AND TECHNOLOGY

The Institute of British Launderers and Cleaners

16-17, Lancaster Gate, London, W.2

There are no examinations leading to membership of the Institute, but a number of full-time and evening classes are conducted by the Institute leading to the examinations of the **Laundry Industry Board of Examiners**.

(i) QUALIFICATIONS AWARDED AFTER FULL-TIME COURSES

Certificate in the Elements of Laundry Technology. This is granted to students successful in an eight-week course, held in January each year at the School of Laundering, Technical Division (Hill View Gardens, London, N.W.4). Candidates must be at least 16½ years old and have six months' laundry experience. The course is intended mainly for students below 'O' level standard in Chemistry and Physics.

Certificate in Laundry Technology. This certificate is awarded to students who successfully complete a 12-week course held in April and September each year at the School of Laundering, Technical Division. Candidates must be at least 17 years old and either be of G.C.E. 'O' level standard in Chemistry and Physics or hold the certificate in the Elements of Laundering Technology.

Certificate in Business Administration. This is awarded to students who successfully complete a 12-week course held in January and September each year at the School of Laundering, Commercial Division (16-17, Lancaster Gate, London, W.2). Candidates must be at least 18 years old and have one year's experience in a laundry.

(ii) QUALIFICATIONS AWARDED AFTER EVENING CLASS STUDY

Evening classes leading to the following examinations are held at the Institute's offices at Lancaster Gate. Classes leading to the Principles of Laundering examinations are also available in Manchester, Liverpool, West Bromwich and Derby. Certificates are

awarded in each case by the Laundry Industry Board of Examiners (16-17, Lancaster Gate, London, W.2).

National Examination in Principles of Laundering. These examinations are taken in two parts.

Part I Wash House methods—is open to students who have attended 60% of the evening lectures of the Institute. The course is designed mainly for wash house men and other operatives. There are no preliminary education requirements for entry.

Part II covers finishing methods; again candidates must have attended 60% of the evening lecture course.

Chemistry and Physics—elementary—are included as subjects of both parts, but students who have passed G.C.E. 'O' level in these subjects may be granted exemption from these parts of the syllabus.

Certificate in Laundry Technology. This is taken after a two-year evening course which replaces the former courses leading to the C.G.L.I. Intermediate and Final Certificates in Laundry Technology—the C.G.L.I. has discontinued these certificates.

This course is suitable for those who have taken the Principles of Laundering course or who have a good knowledge of Chemistry and Physics.

Elementary Business Administration Certificate. This is awarded to candidates who are, in one year, successful in examinations in two or more of the following four parts:

Part I: 8 lectures in the winter term (supervisor's course).

Part II: 12 lectures in the spring term.

Part III: 13 lectures in the winter term.

Part IV: 13 lectures in the spring term.

The parts are graded (Part I is elementary) and they cover all aspects of administration from labour relations to company law.

LAW

QUALIFICATION AS A SOLICITOR IN ENGLAND AND WALES

To practise as a solicitor in England and Wales a candidate must hold a **Certificate** issued by **The Law Society** (Chancery Lane, London, W.C.2), and his name must be inserted in the Roll of Solicitors. This certificate is granted to candidates who are at least 21 years old, have passed the qualifying Examinations and have

completed a period of articles. The Law Society controls the training of solicitors. Most solicitors become members of the Society, but membership is not compulsory. Intending solicitors are required to serve a period of articles with a qualified solicitor while they are studying for the examinations of the Law Society.

Articles. A candidate who wishes to start training must first register as a student with the Law Society. He may study for and take part of the Qualifying Examination before entering into articles and this will affect the length of his articulated service.

The term of articles is normally five years. It is reduced:

- (i) To 4 years for those who have passed Part I of the Qualifying Examination after taking a course of recognised legal education before taking up articles.
- (ii) To $2\frac{1}{2}$ years for graduates of a British university who have passed or obtained a total exemption from Part I.
- (iii) To 2 years for those who have been exempted from Part I and have been given permission by the Law Society to take Part II before articles and have passed.
- (iv) To $2\frac{1}{2}$ years for barristers, Scottish solicitors and advocates, Northern Ireland solicitors and barristers, officers of H.M. Forces of five years' standing and solicitors' clerks with 10 years' experience obtained after the age of 18 years.

Barristers of five years' standing are not required to serve articles.

Students and articulated clerks are admitted as **Associate Members of the Law Society**.

The Qualifying Examination. The minimum standard of education required for entry to the examination is five G.C.E. (or equivalent) passes including at least two at 'A' level. English, English Language or English Literature must be included.

Candidates over 28 years of age may take the Law Society's Preliminary Examination in general academic subjects instead.

The Examination is taken in two parts:

Part I covers outlines of constitutional and administrative law; outlines of the English legal system; contract, torts, criminal law; and land law. Exemption may be granted to students who have passed a comparable law examination. Distinctions may be awarded in any subject.

Part II. The subjects of Part II are conveyancing; accounts; revenue law; equity and succession; commercial law; company law and partnership; and either family law, or local government law, or magisterial law.

Exemption is granted to certain Commonwealth solicitors.

Part II is normally taken at the end of articulated service but in

some cases special permission may be given to candidates to take it before starting articles.

Students who pass all subjects of Part II in one sitting are awarded Honours (of which there are two classes).

Courses for the Law Society's Examinations. Clerks whose set period of articles is longer than $2\frac{1}{2}$ years are required to attend a full-time course of legal instruction in preparation for Part I. The course is taken in two parts each lasting about four months and is organised by the College of Law in London and Guildford and by the Liverpool and Manchester Colleges of Commerce.

Note on Scotland and Northern Ireland. Solicitors admitted in England must serve an apprenticeship and pass examinations in Scotland in order to practise there; they may, however, obtain certain exemptions. A degree in Law of a non-Scottish University, however, carries no exemption from the Law Society of Scotland's examinations.

Solicitors who wish to practise in Northern Ireland must serve an apprenticeship and pass examinations in Northern Ireland. Admission in England is not regarded as a qualification for practice in Northern Ireland.

QUALIFICATION AS A SOLICITOR IN SCOTLAND

Solicitors in Scotland have their names inserted in a Roll of Solicitors and are granted annual **Certificates** entitling them to practise by **The Law Society of Scotland** (North Bank Street, Edinburgh). A Certificate is granted to candidates who are at least 21 years old, have completed a term of apprenticeship and passed approved examinations.

Training in Scotland is largely undertaken by the Universities, but the Law Society of Scotland issues certificates of apprenticeship and prescribes courses of training. Scottish solicitors are required by law to become Members of the Society.

Apprenticeship. Candidates must obtain an Entrance Certificate from the Law Society of Scotland. The length of the apprenticeship is:

- (i) One year for members of the Faculty of Advocates.
- (ii) Two years for those who have taken an Arts degree followed by a Law (LL.B.) degree (5-year course).
- (iii) Three years for those who have already obtained a degree of any university; or have been called to the Bar in England or Northern Ireland; or have been admitted as solicitors in England or Northern Ireland; or have had five years' experience as a solicitor's clerk.

Entrants in group (iii) serve two years, and in group (i) may omit apprenticeship completely if they undertake to serve a post-qualification year of practical training.

The Qualifying Examinations. 95% of those who qualify as Solicitors in Scotland do so by taking an LL.B. (Ord. or Hons.) of a Scottish University (or an Arts degree followed by LL.B.). (*See below—degrees in Law, page 767.*)

Non-graduates may take the **Professional Examinations of the Law Society** instead; many attend University classes in Scots Law, Conveyancing, Evidence and Procedure.

Entrants to the Professional Examinations must have the S.C.E. Higher Grade (or equivalent) passes required by the Scottish Universities Entrance Board for their Certificate of Attestation of Fitness (*see page 89*). The Professional Examinations are as follows:

The Law of Scotland I; Evidence and Procedure; The Law of Scotland II; Book-keeping and Accounting; Conveyancing; Taxation and Death Duties.

The examinations may be taken separately or together in any order. The LL.B. of a Scottish University gives total exemption from the examinations.

Note on England and Wales. A Solicitor who was admitted in Scotland must serve three years as an articled clerk and pass the Law Society's Examination to qualify for practice in England and Wales.

QUALIFICATION AS A SOLICITOR IN NORTHERN IRELAND

The solicitors' professional body in Northern Ireland is the **Incorporated Law Society of Northern Ireland** (Royal Courts of Justice (Ulster) Belfast). To qualify as a solicitor a candidate must (i) obtain a degree in law of a recognised university and (ii) serve three years' apprenticeship with a practising solicitor and (iii) pass the Incorporated Law Society's examinations.

Apprenticeship. This is open only to those who have already obtained a recognised Law degree. The term is three years for all entrants.

Law Degrees. All candidates for apprenticeship must hold a law degree of a recognised university. The recognised universities include Aberdeen, Birmingham, Bristol, Cambridge, Dublin, Durham, Edinburgh, Glasgow, Leeds, Liverpool, London, Manchester, Oxford, Sheffield, St. Andrews, Wales, National University of Ireland and Queen's University, Belfast. (*See Law degrees, page 767.*)

The Incorporated Law Society's Examinations. These are taken during the three-year period of apprenticeship. Candidates attend the first year, second year and finals lectures of the Society and must pass the Society's First Year, Second Year and Final Examinations by obtaining at least 50% in every subject.

First Year Examinations. These cover the Law of contract; personal property; law of tort; company law and the law of partnership; criminal law; law of evidence; book-keeping for solicitors; and income tax. Candidates with an Honours law degree may be granted exemption from the lectures and examination on contract, tort, criminal law and evidence provided that these subjects were covered in their degree course.

Second Year Examinations. The subjects of these are law and practice of bankruptcy; county court practice; chancery division practice and practice in relation to minors and mental patients: matrimonial law and the law of domestic relations; local registration of title; magistrates' courts; practice of the court of appeal and of the Queen's Bench Division of the High Court of Justice. No exemptions are granted.

Final Examinations. These cover real property; equity; conveyancing; law of landlord and tenant, rents and mortgages; law of wills and of intestate succession; death duties and administration of assets; status, responsibility, professional conduct and remuneration of solicitors. No exemptions are granted.

QUALIFICATION AS A BARRISTER IN ENGLAND AND WALES

To qualify as a barrister in England and Wales a candidate must become a student at one of the Inns of Court — Lincoln's Inn, the Middle Temple, the Inner Temple and Gray's Inn. He may attend courses of study organised at the Inns of Court School of Law under the direction of the Council for Legal Education, or he may study privately and part-time. In any case he is required to *keep term*, i.e. to dine in the Halls of his Inn on three days each term, normally for three years (12 terms). A student who has done this, is at least 21 years old and has passed the Bar Examinations — *see below* — is eligible to be *called to the Bar*.

However, to set up in practice as a barrister the student must then read in chambers as a pupil to a junior barrister for 12 months after his call to the Bar or must have taken the Post-Final Practical Training course of the Council for Legal Education (this is for home

students). He is then qualified as a junior barrister.

Note. Queen's Counsel (Q.C.) are barristers of at least eight years' standing who are appointed by the monarch on the recommendation of the Lord Chancellor. This is known as 'Taking Silk'.

Admission as a Student to an Inn of Court. To be admitted to an Inn of Court a student must either hold an approved University degree; or G.C.E. passes including English Language which would entitle a student to enter a university in England or Wales (i.e. normally including two 'A' level passes); or an approved equivalent qualification.

Most Bar students take degrees, either in Law or in other subjects. They may take the degree before being admitted to an Inn of Court, or may be admitted during or before their degree course. Some candidates, however, study part-time for the Bar, 'Keeping term' (*see above*) and continuing in their normal job (there are some restrictions on the occupations which a Bar student may undertake while he is training).

During the period of studentship the candidate may if he wishes attend the lectures at the Inns of Court School of Law in all subjects of the Bar Examinations. There is a special course for graduates taking Part II of the Examination.

The Bar Examinations. The examinations for Call to the Bar are in two parts.

Part I. The subjects of Part I are: Roman law; constitutional law and legal history; the law of contract and tort; the law of real property, or Hindu and Mohammedan law, or Mohammedan law, or Roman-Dutch law, or African law or African law and Mohammedan law; criminal law.

The subjects may be taken separately, in any combination or all together.

Students who have law degrees or who have passed the examinations of the Law Society (*see above* under 'solicitors') may be granted exemption from part or all of Part I.

Part II. Candidates for Part II must have passed Part I and must normally have kept six dining terms.

The subjects of Part II are: Common law — General and special subjects; Equity — General and special subjects; Procedure—Civil and Criminal; Evidence and Company law; Any two subjects from practical conveyancing; divorce (law and procedure); conflict of laws; public international law.

All these sections must be taken at one examination.

Note on Scotland and Northern Ireland. Members of the

English Bar of three years' standing may be admitted to the Scots Bar provided that they take the Private Examination of the Scots Bar in Scots Law, civil and criminal, and conveyancing. They may be admitted to the Bar of Northern Ireland without examination provided that certain regulations are fulfilled.

QUALIFICATION AS AN ADVOCATE IN SCOTLAND

Barristers in Scotland are called Advocates and the profession is controlled by the **Faculty of Advocates** (Advocates Library, Parliament Square, Edinburgh, 1). To qualify for practice a candidate must be admitted to the Faculty. Admission is granted to candidates who have (i) obtained a degree in law or arts of a Scottish university and have passed certain prescribed sections of Private Examinations of the Faculty and the Public Examination of the Faculty or (ii) have passed the Private and Public Examinations of the Faculty. Most candidates take an Arts or Law degree before applying for admission to the Faculty.

THE PROFESSIONAL EXAMINATIONS

The Private Examination in General Scholarship. The subjects of this examination are (i) English and (ii) four subjects from at least three of the following groups:

- (a) Latin, Greek, French, German, Spanish, Italian, Russian.
- (b) Logic and Metaphysics, Moral Philosophy, Political Economy.
- (c) British and Scottish History; British and Modern European History, British Commonwealth and American History.
- (d) Mathematics, Chemistry, Natural Philosophy.

Candidates who have M.A. or LL.B. (Hons.) 1st or 2nd class degrees are exempted from this examination; others who have passed examinations of comparable standard in individual subjects may be granted subject-for-subject exemption.

The Private Examination in Law. This examination covers civil law or civil and comparative law; jurisprudence; Scottish private law I and II; mercantile law, criminal law, evidence and procedure or evidence and pleading, conveyancing; constitutional law or constitutional law and history; international private law; and one subject from forensic medicine; company law; law of taxation; comparative law; comparative constitutions; public international law; industrial law; legal history; history of Scots law, criminology.

Candidates who have LL.B. degrees covering all necessary subjects are exempted from these examinations. Other candidates who have passed examinations of comparable standard in single subjects may be granted subject-for-subject exemption.

The Public Examination. Candidates must have passed or been exempted from the Private Examinations. Most candidates spend the year before the Public Examination as a pupil to a member of the Faculty.

The Public Examination consists of preparing and defending orally before the Faculty a Latin thesis on a prescribed law subject. The members of the Faculty present then vote on the admission of the candidate.

This is now almost wholly a ceremonial formality.

QUALIFICATION AS A BARRISTER IN NORTHERN IRELAND

To qualify for practice as a barrister in Northern Ireland a candidate must be admitted to the degree of Barrister-at-law by the **Honorable Society of the Inn of Court of Northern Ireland** (Royal Court of Justice (Ulster) Belfast). For admission to the degree a candidate must (i) be at least 21 years old; (ii) have 'kept term' at one of the Inns of Court in London (*see above*); (iii) hold an Arts degree of an approved University; (iv) have attended a course of lectures at Queen's University, Belfast, and passed annual examinations; and (v) have passed Part II of the English Bar Examinations.

Candidates must first be admitted as Students at the Inn of Court, Belfast. The minimum requirements for this are qualifications carrying eligibility for university entrance (i.e. G.C.E. (or equivalent) in English, Latin and a science or mathematical subject). Candidates who have not passed in Latin are required to pass the Matriculation examination in Latin of Queen's University, Belfast. Entrants must be at least 17 years old, and must present a memorial of application certified by a practising barrister of at least 10 years' standing. An Arts degree is required as a condition for Call to the Bar; this may be taken before or after application for admission as a student.

Professional Examinations. These are taken annually in three parts during a three- or four-year course of lectures at Queen's University, Belfast. Students must attend at least three-quarters of the lectures, but they may substitute for either the second or the third year at Queen's University a similar course of lectures given by the Council for Legal Education in London (*see above*).

The syllabus for the examinations is similar to that for the English

Bar Examinations; candidates' results in the course examinations are classified as First, Second and Third class and pass.

Candidates who have taken a law course at a British university may be granted exemption from the whole or part of the first year of lectures and from the examinations in certain subjects.

Before being called to the Bar the candidate must also pass Part II of the English Bar Examinations (*see above*). Candidates who show special merit in this examination may be awarded **Certificates of Honour** by the Society of the Inn of Court.

UNIVERSITY DEGREES AND DIPLOMAS

(i) FIRST DEGREES

First degree courses are offered at the following universities, with entry requirements and course durations shown.

Aberdeen. LL.B. Ord. (Jurisprudence may be taken as a principal subject in a Joint Degree for M.A.): 3 years. 2 'A' level G.C.E. or S.C.E. passes; Latin must be passed at 'O' level. **LL.B. Hons.:** 4 years. 2 'A' level G.C.E. or S.C.E. passes. Latin must be passed at 'O' level. **M.A.** (in Jurisprudence; Politics, Jurisprudence; Philosophy, Jurisprudence): 4 years. 2 G.C.E. or S.C.E. 'A' level passes. Latin must be passed at 'O' level. **M.A. and LL.B.:** 5 years.

Belfast. LL.B.: 3 or 4 years. 2 'A' level G.C.E. passes.

Birmingham. LL.B.: 3 years. 2 'A' level G.C.E. passes.

Bristol. LL.B.: 3 years. 2 'A' level G.C.E. passes. Latin must be passed at 'O' level.

Cambridge. B.A.: 3 years. Parts I and II of the Tripos may be taken in Law.

Durham. B.A. (Law may be taken as a Joint Honours subject with Politics, or Economics or Social Theory and Institutions): 3 years. 2 'A' level G.C.E. passes. Latin should preferably be passed at 'O' level.

Edinburgh. LL.B.Ord. Law (Professional or Law General): 3 years. 2 'A' level G.C.E. or S.C.E. passes. Latin must be passed at 'O' level. **LL.B. Hons.:** 4 years. Entry requirements as for LL.B. Ord. **M.A. and LL.B.:** 5 years.

Exeter. LL.B.: 3 years. 2 'A' level G.C.E. passes. (Law may be taken as part of a General or of a Joint Honours degree.) **B.A.** (Law may be taken in combination with economics or Sociology with Government): 3 years. 2 'A' level G.C.E. passes.

Glasgow. LL.B. Ord.: 3 years. 2 'A' level G.C.E. or S.C.E. passes. Latin must be passed at 'O' level. **LL.B. Hons.:** 4 years. Entry requirements as for LL.B. Ord.

Hull. LL.B.: 3 years. 2 'A' level G.C.E. passes. **B.A.** (Law may be taken with Political Studies, Latin, Philosophy or Sociology): 3 years. 2 'A' level G.C.E. passes.

Keele. B.A. (Law may be taken as one of two principal subjects with economics or political institutions): 4 years. 2 'A' level G.C.E. passes.

Kent. B.A.: 3 years. 2 'A' level G.C.E. passes. Mathematics must be passed at 'O' level.

Leeds. LL.B.: 3 years. 2 'A' level G.C.E. passes, preferably including History. Latin should, if possible, be offered at 'O' level.

B.Com. (with Law as principal subject): 3 years. 2 'A' level G.C.E. passes.

Leicester. LL.B.: 3 years. 2 'A' level G.C.E. passes.

Liverpool. LL.B.: 3 years. 2 'A' level G.C.E. passes; a working knowledge of Latin is desirable.

London (King's College). LL.B.: 3 years. 2 'A' level G.C.E. passes. An 'O' level pass in English History is desirable.

London (London School of Economics). LL.B.: 3 years. 2 'A' level G.C.E. passes.

London (Queen Mary College). LL.B.: 3 years. 2 'A' level G.C.E. passes.

London (University College). LL.B.: 3 years. 2 'A' level G.C.E. passes.

(Courses for the London external LL.B. may be taken at a number of colleges of further education.)

Manchester. LL.B.: 3 years. 2 'A' level G.C.E. passes.

Newcastle. LL.B.: 3 years. 2 'A' level G.C.E. passes.

Nottingham. B.A.; LL.B.: 3 years. 2 'A' level G.C.E. passes.

Oxford. B.A.: 3 years. The Second Public Examination may be taken in Jurisprudence.

Sheffield. LL.B.: 3 years. 2 'A' level G.C.E. passes. **B.A. Econ.** (Law may be taken with Economics, Accountancy and Financial Advice): 3 years. 2 or 3 'A' level G.C.E. passes. Mathematics should preferably be passed at 'O' level.

Southampton. LL.B.: 3 years. 2 'A' level G.C.E. passes. **B.Sc. (Soc.Sci.)** (Law may be taken with either Accountancy, Politics, Commerce or Sociology): 3 years. 2 'A' level G.C.E. passes.

St. Andrews. LL.B.: 3 years. 2 'A' level G.C.E. or S.C.E. passes. Latin must be passed at 'O' level. **M.A., LL.B. in Social Science and Law:** 5 years. 2 'A' level G.C.E. or S.C.E. passes.

Latin must be passed at 'O' level. **M.A., LL.B. in Arts and Law:**

2 'A' level G.C.E. or S.C.E. passes which must include either:

- (i) one of Greek or Latin
- (ii) two of Arabic, French, German, Russian, Spanish
- (iii) Mathematics and one of Arabic, French, German, Russian, Spanish, with an 'O' level pass in Latin.

Warwick. B.A. (subject to confirmation): 3 years. 3 'A' level G.C.E. passes.

Wales (Aberystwyth). LL.B.: 3 years. 2 'A' level G.C.E. passes.

Wales (Cardiff). B.Sc. Econ. (Joint Honours may be taken in Economics and Law): 3 years. 2 'A' level G.C.E. passes. Mathematics should preferably be passed at 'O' level.

Welsh C.A.T. LL.B.: 3 years. 2 'A' level G.C.E. passes. English Language must be passed at 'O' level.

(ii) HIGHER DEGREES

The following universities award higher degrees in Law.

Aberdeen. LL.M.: conferred on arts graduates after a 2-year postgraduate course. **LL.D.:** conferred at least 7 years after first degrees.

Belfast. LL.M.: may be taken not less than 1 year after LL.B., awarded for research with an examination and a dissertation. **LL.D.:** conferred on Belfast graduates distinguished in law, or in legal or historical research, or in respect of a thesis or published work; awarded not less than 5 years after first degree.

Birmingham. LL.M.: usually 2 years after LL.B. **Ph.D.** Also **LL.D.:** conferred on Birmingham graduates not less than 3 years after LL.M.

Bristol. LL.M.: usually 2 years after LL.B. **LL.D.:** may be awarded not less than 6 years after first degree; non-Bristol graduates must undertake 3 years' research in the University.

Cambridge. LL.B.: the examination for this degree is open to students who have obtained honours in either part of the Law tripos, or who hold a B.A. degree and are qualified to practise as solicitors or barristers in England or Ireland or as advocates or law agents in Scotland, or who have passed an approved law examination of another university. **LL.M.:** may be awarded not less than 2 years after LL.B. or B.A. **LL.D.:** may be awarded 8 years after B.A.

Edinburgh. LL.D.: conferred at least 7 years after graduation.

Exeter. LL.M.; LL.D.: may be conferred on Exeter graduates of at least 7 years' standing.

Glasgow. LL.M.: conferred after a 2-year full-time or 3-year part-time course of study. **Ph.D.** Also **LL.D.:** may be conferred on graduates of Scottish universities in respect of written work.

Hull. LL.M.: by thesis. **LL.D.:** may be conferred on Hull graduates in respect of published work.

Keele. Ph.D.

Leeds. LL.M.; LL.M. Com.: may be awarded to Leeds graduates 1 year after first degree, to other graduates after 2 years. **LL.D.:** may be conferred on Leeds graduates of 6 years' standing.

Leicester. Ph.D.

Liverpool. LL.M.: may be awarded as a thesis based on 2 years' work after LL.B. **LL.D.:** may be awarded to Liverpool graduates of at least 7 years' standing in respect of published work.

London. LL.M.: may be taken 2 years after LL.B. or academic postgraduate diploma in law or equivalent qualification; the degree is awarded on examination (4 papers) or on dissertation and examination (2 papers). **Ph.D.** Also **LL.D.:** awarded for published work to holders of LL.B. or LL.M. or Ph.D. in Faculty of Law.

Manchester. LL.M.: may be conferred on Manchester LL.B.'s of 1 year's standing and on other graduates after 2 years' research. **LL.D.:** may be awarded to graduates of 5 years' standing.

Newcastle. LL.M.: may be conferred 2 years after LL.B. **LL.D.:** may be awarded 4 years after LL.M. or 6 years after LL.B.

Nottingham. LL.M.: may be conferred on Nottingham graduates after 1 year's research and on other graduates after 2 years' research. May also be conferred on non-graduates after 4 years' research. **LL.D.:** may be conferred on Nottingham graduates of at least 7 years' standing and on other graduates of at least 7 years' standing who have been in the service of the University for at least 4 years.

Oxford. B.C.L.: the examination for this degree, taken after a 2-year course of instruction, is open to B.A.'s of the University with 1st or 2nd class honours in Jurisprudence and to other approved graduates. The examination covers Roman and English law and 2 optional subjects. **D.C.L.:** may be awarded for published work forming a substantial contribution to legal learning.

Sheffield. LL.M.: conferred by thesis or examination, on graduates of 1 year's standing. **Ph.D.** Also **LL.D.:** conferred on Sheffield graduates for distinction in research or learning in Law.

Southampton. LL.M.: awarded 1 or 2 years after LL.B. **LL.D.:** awarded 6 years after LL.B.

St. Andrews. LL.D.: conferred on graduates of at least 7 years' standing.

Wales. LL.M.: awarded to graduates who carry out research—honours graduates for 1 year, others for 2. Also **Ph.D.** and **LL.D.**

(iii) DIPLOMAS AND CERTIFICATES

University of Cambridge:

Diploma in Criminology	}	These Diplomas are open to graduates of any university and are awarded 1 year after graduation.
Diploma in Roman Law		
Diploma in Comparative Legal Studies	}	These Diplomas are open to registered research students who have undertaken a 1-year course of research.
Diploma in International Law		
Certificate in Advanced Studies in English Law	}	These Certificates are awarded to students eligible to take the LL.B. examination but unable to complete the residence requirements for the LL.B. degree.
Certificate in Legal History		
Certificate in Roman Law		
Certificate in International Law		

University of Hull: Diploma in Comparative Law. This is taken after a 3-term course of study.

University of Liverpool: Diploma in International Law. Awarded by thesis and examination after 1 year's study; open to graduates and holders of comparable qualifications.

University of London: Academic Postgraduate Diploma in Law. Awarded after study of at least 1 year.

Diploma in African Law	}	Awarded by the School of Oriental and African Studies after a course of 1 to 3 years.
Diploma in Islamic and Comparative Law		
Certificate in African Law	}	Awarded by the School of Oriental and African Studies after a course of 1 to 2 years.
Certificate in Islamic and Comparative Law		

University of Manchester: Diploma in International Law. Awarded after a 1-year postgraduate course.

University of Newcastle: Diploma in Advanced Legal Studies. Awarded after a 1-year postgraduate course.

LEATHER TECHNOLOGY

The Worshipful Company of Leathersellers and **The British Leather Federation**, 9, St. Thomas Street, London, S.E.1 are non-qualifying bodies.

UNIVERSITY DEGREES AND DIPLOMAS

(i) FIRST DEGREES

Leeds. B.Sc. in Leather Science: 4 years (Honours) or 3 years (Ordinary). G.C.E. 'A' level passes required in Chemistry, Physics and Mathematics although a biological subject may replace Mathematics.

Leeds. B.Com.: may be taken with Leather Manufacture as a principal subject (*see* Commerce degrees).

(ii) HIGHER DEGREES

Students may be accepted at the university of **Leeds** for courses of study and research leading to **M.Sc. and Ph.D. in leather science**.

(iii) UNIVERSITY DIPLOMAS

University of Leeds. Diploma in Leather Manufacture: 3 years. (Course closed.)

Postgraduate Diploma in Leather Science of the University of Leeds. A one-year course, open to science graduates, leads to this Diploma. The most suitable first degree subjects are Chemistry or Chemical Engineering.

COLLEGE QUALIFICATIONS

(i) AWARDS MADE AT THE NATIONAL LEATHERSELLERS' COLLEGE: 176, Tower Bridge Road, London, S.E.1.

Diploma Course. This course covers the science and practice of leather manufacture, pure science and management studies. The course may last one, two or three years according to entry qualifications.

3-year course: Entry requirements are 4 G.C.E. 'O' level passes including English, Chemistry, Mathematics and another science subject, or S.1 stage of the O.N.C. course in Chemistry or Applied Chemistry or Applied Physics or Metallurgy; or an equivalent qualification.

2-year course: G.C.E. 'A' level passes in 2 subjects including Chemistry and a science subject or Mathematics with

another science subject at 'O' level; or O.N.C. in Chemistry or Applied Chemistry with Physics or Mathematics at least at S.2 level; or an equivalent qualification.

1-year course: a science degree of a British university.

Associateship of the National Leathersellers' College.

Those who have a first or second class pass in the College Diploma (*see above*) or a science degree of a British university may take a further year's course at the College and present a thesis to gain the Associateship of the College.

Certificate of the National Leathersellers' College. Candidates who are at least 21 years old and have had experience in the leather industry may take courses on specialised aspects of leather manufacture which lead to College Certificates.

(ii) NORTHAMPTON COLLEGE OF TECHNOLOGY

Diploma Course. This is a three-year course covering theory and practice of leather manufacture with an optional subject from a science subject, industrial organisation, boot and shoe technology, engineering and languages. The entry qualification is G.C.E. 'O' level including English and science subjects or an equivalent qualification.

Management trainees in the leather industry, entering at the age of 16 to 18 years are often put forward for Diploma courses as part of their training, which would also include management studies and practical experience in factories and sales organisation.

CITY AND GUILDS OF LONDON EXAMINATIONS

The C.G.L.I. holds an examination in Leather Manufacture, Dyeing and Finishing (Subject No. 18) (Leather-Worker's Certificate, Craft or Technician's Certificate) and in Leather Goods Manufacture (Subject No. 129) (Intermediate and Final).

LEGAL EXECUTIVES

The Institute of Legal Executives

Maltravers House, Arundel Street, Strand, London, W.C.2

Legal executives are clerks, working in a solicitor's office and specialising in practical legal work. In order to provide a scheme

of professional training the Solicitors' Managing Clerks' Association has been reformed and renamed and together with the Law Society has produced a system of examinations for solicitor's clerks.

Fellow (F.Inst.L.Ex.). A candidate may be admitted as a Fellow if he is an Associate of the Institute, has been in qualifying employment as a solicitor's clerk or in a legal office for at least 8 years, has taken an approved course of instruction and passed or been exempted from all the Legal Executives' examinations, and is at least 25 years old.

Associates must have been in qualifying employment (*see above*) for at least three years, have taken an approved course of instruction, have obtained G.C.E. 'O' level or an equivalent pass in English language, have passed or been exempted from the Institute's Associateship examination and must be at least 20 years old.

Students. A candidate may be enrolled as a student provided that he is at least 17 years old and is in qualifying employment (*see above*), or, being under 17 years, has been in qualifying employment for six months.

THE PROFESSIONAL EXAMINATIONS

Associate Examination. Candidates for this examination must be enrolled students of the Institute, have taken or been exempted from a course of legal instruction (part-time, at a technical or other college or by correspondence) and have obtained a G.C.E. 'O' level or equivalent pass in English Language.

The syllabus is divided into two parts and two papers are set in each part. Both parts may be taken together. The subjects of the syllabus are as follows:

Part I—Law Paper: Introduction; Sources of law; Legal personality, status and capacity; the law of property — land law, personal property, the law of contract; law of tort.

Part I — Procedure Paper: 'A' litigation — introduction, proceedings in the county courts; proceedings in magistrates' courts and courts of quarter sessions; miscellaneous tribunals; 'B' Conveyancing practice unregistered land (freehold and leasehold), registered land (freehold and leasehold, mortgages; leases and tenancy agreements).

Part II—Law Paper: constitutional law, criminal law; law of the welfare state; trusts; succession on death and on bankruptcy; evidence.

Part II—Procedure Paper: 'A' litigation — action by writ or summons in all divisions of the High Court; proceedings by originating summons in all divisions of the High

Court; proceedings by petition in all divisions of the High Court—divorce, companies court, general provisions; searches in public registers; 'B' probate — probate; letters of administration; letters of administration with will annexed; *de bonis non*; double grants; 'C' companies — types of companies; registration; promotion and preliminary contracts; incorporation; first meeting.

Exemption. Exemption from attendance at a course of instruction will be granted to those who were at least 26 years old on 1st January, 1963, and had then been in qualifying employment for at least seven years or who have obtained at least two certificates of Proficiency for Junior Clerks awarded by the Solicitors' Managing Clerks' Association. Exemption from the Associate Examination is granted in part or in whole to holders of recognised qualifications in law of a comparable standard.

Fellowship Examination. Candidates must be Associates of the Institute and must have taken or been exempted from a course of legal instruction at a technical college or by correspondence. The examination consists of any three of the following papers chosen by the candidate: (1) Conveyancing Part I. (2) Conveyancing Part II. (3) Equity including trusts. (4) Probate and succession. (5) The law of contract. (6) Commercial law. (7) Law of tort. (8) Criminal law. (9) Matrimonial law. (10) Company and partnership law. (11) Law of patents. (12) Local Government law and practice. (13) Revenue law. (14) Costs. (15) Trust accounts and accounting.

Exemption. Exemption from taking a course will be granted to candidates who were at least 35 years old on 1st January, 1963, and had then been in qualifying employment for at least 15 years.

Whole or partial exemption from the Fellowship Examination may be granted to holders of a recognised law degree; or those who have passed the Law Society's examinations (*see above* 'Solicitors') or the Bar examination in England; or the examinations of the Faculty of Advocates (*see above* 'Barristers') provided in each case that the Associate has completed eight years' qualifying employment.

Exemption from the examinations may also be granted to holders of the Solicitors' Managing Clerks' Certificate issued by the Law Society jointly with the Solicitors' Managing Clerks' Association under the Joint Examination in operation immediately before 1963.

Courses. A large number of commercial and technical colleges throughout the country offer part-time courses leading to the Institute's examination and study is also possible by correspondence course.

LIBRARIANSHIP AND INFORMATION WORK

The Library Association

Chancer House, Malet Place, London, W.C.1

The Association maintains a register of Chartered Librarians in two categories.

A Fellow (F.L.A.) must be a fully qualified Chartered Librarian (or Associate) of at least five years' standing. He may be elected to Fellowship by the Council upon the evidence of a thesis on a professional subject.

An Associate (A.L.A.) is a fully qualified Chartered Librarian who has passed Part II of the Library Association's examinations, has completed at least three years' experience in library work (at least one year of this after passing Part II) and has a G.C.E. pass in a science subject or a foreign language.

QUALIFYING EXAMINATION

Entrance Examination. This examination is at present taken by trainees who enter library work without 'A' level G.C.E. passes. Such trainees must, however, have at least five 'O' level G.C.E. (or equivalent) passes including English Language. Before entering for the professional examinations, Parts I and II, they study part-time for either (and preferably) two 'A' level G.C.E. passes or for the Association's Entrance Examination, which is of comparable standard and covers English and general subjects. It is intended that in future only graduates and holders of G.C.E. 'A' level passes shall be recruited for library training, and these provisions for 'O' level entrants are an interim measure.

PROFESSIONAL EXAMINATIONS

These are taken after either a full-time course (one year for graduates, two for others) or after part-time study usually taking five to six years.

Intermediate Examination (Part I). Candidates for this examination must either have passed the Entrance Examination or have passed G.C.E. (or an equivalent examination) in five subjects including English language (two of these subjects must be at 'A' level); or S.C.E. in five subjects including English (three subjects must be on the Higher Grade). The examination includes papers on the Library and the Community; Government and Control of libraries; the Organisation of Knowledge; and Bibliographical Control and Service.

Exemption from Part I is granted to graduates of British Universities.

Final Examination (Part II). Candidates for Part II must have passed Part I. The examination includes papers from three lists covering: (i) Administration, (ii) Library techniques and (iii) Applied librarianship in specialist fields (technical, legal, etc.). Candidates take six papers including one from each list. Those who pass the examination, have a science subject or foreign language among their G.C.E. passes and have had sufficient approved experience are eligible for Associateship of the Association.

Full exemption from the final examination is granted to holders of the University of London postgraduate Diploma in Librarianship.

COURSES

The following colleges offer full-time courses leading to the Library Association's qualifications. These courses are two years for 'A' level entrants, one year for graduates. Candidates who have the necessary qualifications may apply or may be sponsored for the course by their employing authority after they have had experience in a library.

Birmingham College of Commerce; Brighton Technical College; Scottish College of Commerce, Glasgow; Leeds College of Commerce; Liverpool College of Commerce; College of Further Education, Loughborough; North-Western Polytechnic; Manchester College of Commerce; Ealing Technical College; Newcastle Municipal College of Commerce.

The Institute of Information Scientists

Hon. Secretary:

'Torran', Crofton Road, Orpington, Kent

Fellows (F.I.Inf.Sc.), who must be Members with at least ten years' approved experience in information work, are elected by the Council of the Institute in recognition of distinguished work, service or original work in a senior position.

A Member (M.I.Inf.Sc.) must (i) either be a graduate of a British university or hold an equivalent qualification; or have passed G.C.E. 'A' level in at least one subject and have had five years' experience in scientific or technical work and (ii) either have obtained the Certificate of the Institute and have had two years' experience in information work; or have had five years' experience in information work.

An Associate (A.I.Inf.Sc.) must either (i) be a graduate of a British university or hold an equivalent qualification and have one year's experience in information work; or (ii) have had five years' experience in scientific or technical work after obtaining G.C.E. 'A' level passes and have had one year's experience in information work; or (iii) have obtained G.C.E. 'A' level (or its equivalent) in two subjects including a science subject and either have obtained the Certificate of the Institute and have had two years' experience in information work, or have had five years' experience in information work.

A Student Member is one who is studying for the Institute's examinations. He must have reached G.C.E. 'O' level standard and have passed 'O' level in at least one scientific subject. He should also be employed in information work, or undertaking approved study. Student Members over the age of 28 years may remain in this grade for five years only.

THE INSTITUTE'S EXAMINATIONS

Two courses are listed on the Institute's educational syllabus. Both are available at the Northampton College of Advanced Technology, London.

Diploma course. This is a postgraduate course of one academic year.

Certificate course. This is a two-year part-time evening course—on two evenings each week. The examinations for the Institute's Certificate are taken in two groups, at the end of the first and second year of the course.

Both courses cover the techniques of information work, including abstracting, indexing, technical editing and dissemination of information. The Diploma course also includes extensive practical work and tuition in a foreign language.

(It is also possible to qualify for information work by taking specialist papers in the Library Association's examinations or in the Diploma in Librarianship examinations of the University of London (U.C.L.) and the University of Sheffield.)

UNIVERSITY DIPLOMAS AND CERTIFICATE

Diploma in Librarianship, University of London (School of Librarianship and Archives, University College): this is a one-year postgraduate course open to honours graduates with first or good second class degrees. The Diploma gives exemption from the Final examination of the Library Association and admission to the Associateship of the Association.

(Study for the London University Diploma in Librarianship is

also available at the School of Oriental and African Studies.)

Diploma in Librarianship of the University of Sheffield: this is a one-year postgraduate course with special reference to work in technical libraries.

Supplementary Certificate in School Librarianship. University of Birmingham: the one-year course for this Certificate is open to qualified teachers who want an additional qualification in school librarianship.

LOCAL GOVERNMENT

The Local Government Examinations Board (41, Belgrave Square, London, S.W.1) conducts internal promotion examinations for Local Government officers. These are the Clerical Division Examination and the Administrative Division Examination, success in the Final of which carries the award of the **Diploma in Municipal Administration (D.M.A.)**. (See section on Municipal Administration, page 829.)

The Institute of Local Government Administration

57, London Road, Clacton-on-Sea, Essex

Members. Membership of the Institute is open to local government officers who hold one of the following qualifications:

A degree in Administration or a Diploma in Public Administration of a British university; the examination qualification of the Chartered Institute of Secretaries; the Local Government examination qualification of the Corporation of Secretaries; or any other approved equivalent administrative qualification.

Associate Membership is open to officers who have passed the intermediate stage of the examinations listed above.

Student Membership is open to officers who are studying Local Government Administration.

MANAGEMENT

The British Institute of Management

Management House, Fetter Lane, London, E.C.4

Fellow (F.B.I.M.). Admission to this grade is by invitation of the Board of Fellows, the number of whom is limited to maintain



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Member (M.B.I.M.). A Member must have been an Associate of the Institute for a considerable time and hold a senior management position.

Associate Member (A.M.B.I.M.). An Associate Member must normally be at least 30 years old, unless he has taken a course of management studies. It is desirable that he should hold the Diploma in Management Studies sponsored only by the Department of Education and Science and the B.I.M., or the B.I.M. Graduate Examination—to be discontinued in 1966. He must have held a responsible management post for at least three years.

A Graduate is one who has passed the B.I.M. Graduate Examination and not had the experience to qualify for other grades of membership. The examination, comparable in standard with the new Diploma in Management Studies, is to be discontinued in 1966, largely because it has been superseded by the new Diploma. No more graduates will be elected after 1966.

Retired Members are those who are at least 65 years old and have been members of the Institute for at least 15 years.

An Affiliate is one who is interested in management; he may be a practising manager, an accountant, or other professional worker interested in management principles or a student following a course of management studies.

EXAMINATIONS

(The British Institute of Management will continue to conduct examinations for the **Certificate in Foremanship and Supervision.**)

The Diploma in Management Studies is awarded by the B.I.M., the Department of Education and Science and the Ministry of Education for Northern Ireland. It is accepted as a professional qualification for membership by the B.I.M. The course for the Diploma is divided into two stages — Stage I deals with the general business environment, Stage II with the main functional areas of management.

The courses may be full-time, six months full block-release or part-time; six months full-time study must be included in sandwich and block-release courses.

For entry to Stage I a candidate should hold a university degree, a Diploma in Technology, H.N.D., H.N.C. with endorsements, or the qualifying certificate of an approved professional body. For entry to Stage II a student must have completed Stage I or obtained exemption from it (this is very rarely granted) and have had practical experience in industry. A candidate should normally be at least 24 years old when taking Stage II.

The Institute of Office Management

167, Victoria Street, London, S.W.1

A Member must be responsible for his company's office or a large section of it, or a senior specialist in, or teacher of, office management. Membership is also open to those who pass the examinations for the Institute's Diplomas in Office Management and in O. & M. They may then describe themselves as **M.I.O.M. (Dip.)**.

Associate. A person whose job does not qualify him for membership may, if he is over 27 years old and has a responsible position, become an Associate of the Institute. Holders of the Institute's certificates may become Associates.

(Companies may become Patrons of the Institute by subscription.)

DIPLOMA EXAMINATIONS

Diploma in Office Management and Diploma in Organisation and Methods. The examinations for these diplomas are taken after part-time tuition or correspondence course study. The subjects are as follows:

Part A: accounting practice, cost accounting practice, higher business control.

Part B: fundamentals of office management, office methods, office administration and either management principles or O. & M. practice (for O. & M. Diploma).

Candidates for the Diplomas must be Associates of the Institute and have already obtained recognised academic or professional qualifications—these include a university degree or diploma, a Final Professional Certificate of an approved body, H.N.C. and the Institute's own Certificates.

Holders of the Final Examination Certificates of certain professional bodies may be granted exemption from Part A. Holders of H.N.C. and British Institute of Management and other management examinations may also obtain partial exemption from Part B.

Diploma holders become Members of the Institute and may describe themselves as **M.I.O.M. (Dip.)**.

CERTIFICATE EXAMINATIONS

These are taken after part-time studies. They carry entry to Associate membership of the Institute and are an acceptable qualification for entry to the Institute's Diploma examinations.

Certificate in Office Supervision. The examinations for this certificate are in two parts. It is not necessary to pass in both parts at one examination. Part A covers the theory and practice of

supervision and Part B clerical operations and procedure.

Intermediate Certificate in O. & M. Studies. The examinations for this certificate also are in two parts and it is not necessary to pass in both at one examination. Part A is concerned with background studies—the principles of O. & M. and study of the office environment, Part B deals with the application of O. & M.

COURSES

Colleges in the places listed provide tuition for at least one of the Certificate examinations for the Institute. Those marked with an asterisk (*) provide courses for the Diploma examination.

Barnsley; Bath; Belfast; Birmingham; Blackburn; Bracknell; Brighton; Bristol; Cardiff; Chesterfield*; Clowne; Colchester; Coventry; Crawley*; Dagenham*; Derby; Doncaster; Dundee; Dunstable; Eastleigh; Exeter; Farnborough; Glasgow; Gloucester; Grimsby; Harrow*; Hatfield*; High Wycombe; Hull; Ipswich; Kidderminster; Kingston; Lancaster; Leamington; Leeds; Lincoln; Liverpool*; London: Balham, Camden Town (North-Western Polytechnic)*, Ealing*, East Ham, Moorgate (City of London College)*, Walthamstow, West Ham, Westminster*, Woolwich; Manchester*; Middlesbrough; Newbury; Newcastle*; Newport; Northwich; Nottingham; Plymouth*; Rochdale; St. Helens; Salford; Scarborough; Sheffield*; Shrewsbury; Slough; Solihull*; Southampton; Stoke; Thurrock; Watford; Wednesbury*; Welwyn; West Hartlepool; Worthing.

The Institution of Works Managers

34, Bloomsbury Way, London, W.C.1

(i) CORPORATE MEMBERSHIP

Honorary Fellows (Hon. F.I.W.M.) are corporate members elected for outstanding service to the profession.

Fellows (F.I.W.M.) are men of distinction in the profession, a limited number of whom are elected annually.

Members (M.I.W.M.) must be at least 30 years old and have held the post of Works Manager or a comparable position in a firm for a considerable time.

An Associate Member (A.M.I.W.M.) must be at least 28 years old (26 if he has passed the Institution's Diploma examinations — *see below*). He should hold a responsible position in Works Management and have received regular training or have had wide experience in this or an allied field.

(ii) NON-CORPORATE MEMBERSHIP

Companion (Comp.I.W.M.). This grade is awarded for outstanding services to the profession to people who are not members of the Institution.

Graduate Members (Grad.I.W.M.) are student members of the I.W.M. who have passed its certificate examinations or obtained exemption from them and have had some practical experience. Graduate members must be 22 years old and membership at this grade is normally limited to five years.

An Affiliate is one who is at least 25 years old, holds a position which makes him eligible for Associate membership but does not qualify by reason of age or lack of suitable experience.

Students must be at least 21 years old and in the process of obtaining industrial experience while studying for the Institution's examinations (*see below*) or an accepted alternative.

EXAMINATIONS

The Certificate in Works Management. Only students of the Institution are admitted to this examination (*see above*). The examination is taken after a correspondence or part-time course. Full exemption may be granted to holders of certain other qualifications in management studies. The Certificate examination, which consists of one paper (A) on the fundamentals of management; two (B) on management law and the economics of industry; two (C) on works management in practice, and one (D) on human relations and communication, gives the right of election to Graduate Membership of the Institution.

The Diploma in Works Management is taken after part-time study, including day release, at a technical college. Entry is by selection and candidates should hold the above Certificate or have been elected to Graduate membership with exemption from the certificate examinations or have been elected to corporate membership. They should be at least 25 years old at the beginning of their course and have had at least four years' industrial experience, two of them in a responsible position in works management.

No exemptions are granted from the Diploma Examinations.

The syllabus, planned by individual colleges, covers investigating and forecasting, planning, organising, directing, co-ordinating, controlling and communicating. There is no written examination but students keep a log book during the course, may write a special thesis, and take a viva voce test.

Successful students are automatically regraded as Associate members of the Institution.

UNIVERSITY DEGREES AND DIPLOMAS

(i) FIRST DEGREES

Bradford I.T. Degree in Management Science: 3 years.

Bristol C.S.T. B.Sc. Hons. in Economics and Administration: 4 years sandwich. 2 'A' levels.

Loughborough C.T. B.Tech. Hons. in Industrial Engineering and Management: 4 years sandwich. Candidates should have 2 'A' levels and Mathematics at 'O' or 'A' level.

University of Manchester. B.Sc. Hons. Management Studies (Faculty of Technology): 3 years. Candidates should have 2 'A' levels, and Mathematics at 'O' or 'A' levels.

(ii) DIPLOMAS

Birmingham C.A.T.: Diploma in Management Studies. 6-month postgraduate course.

Bradford I.T.: Diploma in Industrial Administration. 1-year postgraduate course.

Bristol C.S.T.: Diploma in Management and Operational Research; Diploma in Industrial Administration. 3 terms part-and full-time.

Brunel College: Diploma in the Study of General Management. 1-year postgraduate course.

University of Edinburgh: Diploma in Management Studies. Open to graduates and other qualified and experienced people. 1-year course.

University of Glasgow: Diploma in Public Administration. 3-year course. Certificate in Industrial Administration. 1-year course.

University of Hull: Diploma in Operational Research for Management. 1-year course.

University of Leeds: Postgraduate Diploma in Industrial Management.

University of Liverpool: Diploma in Industrial Administration for qualified candidates. 1- or 2-year course.

University of London (L.S.E.): Postgraduate Diploma in Public Administration. 2-year course.

University of Manchester: Postgraduate Diploma in Economic and Social Studies (Management). 1-year course.

University of Strathclyde: Diploma in Management Studies. 4-year part-time course.

Royal C.A.T., Salford: Diploma in Advanced Studies in Management Studies. 1- or 2-year postgraduate full-time course.

SCOTTISH QUALIFICATIONS

Certificate in Business Administration. This course is available full-time and also by day-release at Dundee Technical College. It is designed for the junior or trainee manager and entrants must be at least 21 years old. Although it is a qualification in its own right, it can also serve as an introduction to the Diploma in Business Studies.

MATHEMATICS

The Mathematical Association

(founded 1871) 29, Gordon Square, London, W.C.1

The Association states that its purpose is 'to form a strong combination of all persons who are interested in fostering good methods of teaching Mathematics'. The Association awards two diplomas, both by examination.

THE ASSOCIATION'S EXAMINATIONS

The Diploma in Mathematics (Teaching) is awarded to those who pass the Diploma Examination, having declared their intention to teach. There are four papers in which a satisfactory standard has to be reached at one and the same examination. Endorsements are made for candidates who pass additional examinations in Advanced Applied Mathematics or Advanced Statistics, or both.

The Diploma in Mathematics (Technology) is intended as evidence of professional status for those who do not hold a university degree or a Diploma in Technology. There are two parts to the examination. In Part II the examinations include six-hour practical examinations in either Numerical Analysis or Statistics. Evidence that two typical problems for a digital computer have been successfully programmed must also be produced.

The minimum entry requirements for the Technology diploma are either three 'O' level passes together with an 'A' level pass in Mathematics, or a good O.N.C. or equivalent.

The Advanced Diploma in Mathematics (Technology) is not normally taken by candidates completing Part II of the examination until two years have elapsed. Included in the examination is a project in either Numerical Analysis or Statistics.

UNIVERSITY DEGREES AND DIPLOMAS

(i) UNIVERSITY DEGREES

Honours courses in mathematics are offered at the following universities. For details of higher and other degrees in Mathematics, reference should be made to the entries for the individual universities. Course requirements vary considerably, but all universities require at least two 'A' level passes in mathematical subjects. Those that require three 'A' level passes are indicated (3). Also some universities require or prefer an 'A' level pass in physics, these are indicated (P).

Aberdeen. M.A. or B.Sc.: 4 years.

Belfast. B.A., B.Sc.: 3 or 4 years.

Birmingham. B.A., B.Soc.Sc., B.Sc.: 3 years (3).

Bristol. B.A., B.Sc.: 3 years (P).

Cambridge. B.A.: 3 years. Degree awarded on Part II examination; Part III is a more advanced stage.

Durham. B.A., B.Sc.: 3 years.

East Anglia. B.Sc.: 3 years (P).

Edinburgh. M.A. or B.Sc. (in Mathematical Science or Physics): 4 years (P).

Essex. B.A.: 3 years.

Exeter. B.A., B.Sc.: 3 years.

Glasgow. B.Sc.: 4 years.

Hull. B.A., B.Sc.: 3 years.

Keele. B.A.: 4 years. Mathematics one principal subject.

Kent. B.Sc.: 3 years.

Lancaster. B.A.: 3 years.

Leeds. B.A., B.Sc.: 3 or 4 years.

Leicester. B.A., B.Sc.: 3 years (3).

Liverpool. B.A., B.Sc.: 3 years (3).

London: Bedford. B.A., B.Sc.; Birkbeck. B.A., B.Sc.; Imperial College. B.Sc.; King's. B.A., B.Sc. (P); L.S.E. B.Sc.(Econ.); Queen Elizabeth. B.Sc. (3, P); Queen Mary. B.A., B.Sc.; Royal Holloway. B.A., B.Sc. (3); University College. B.A.; also Westfield, Northern Polytechnic, Sir John Cass. B.A., also West Ham C.T., Woolwich Polytechnic, all B.Sc. 3 years.

Manchester. B.A., B.Sc.: 3 years. **B.Sc.** in Faculty of Technology (P).

Newcastle. B.A., B.Sc.: 3 years. (3).

Nottingham. B.A., B.Sc.: 3 years (3) or 4 years.

Oxford. B.A.: 3 years.

Reading. B.A., B.Sc.: 3 years (3).

St. Andrews. B.Sc. (in Mathematics or Applied Mathematics): 4 years.

Sheffield. B.A., B.Sc.: 3 years (3, P.).

Southampton. B.A., B.Sc.: 3 years.

Strathclyde. B.Sc.: 4 years.

Sussex. B.A., B.Sc.: 3 years.

Warwick. B.Sc.: 3 years.

Wales: Aberystwyth. B.A., B.Sc.: (Pure Mathematics, Mathematics (P), Applied Mathematics); **Bangor. B.A., B.Sc.** (3); **Cardiff, Swansea. B.A., B.Sc.:** (3). All 3 years.

The following universities offer **honours courses in Mathematics and Philosophy**:

Birmingham, Bristol, Hull, Keele, Leeds, Liverpool, Manchester, Nottingham, Sheffield, Southampton, York, Wales (Cardiff).

Courses for **B.Sc. (Special) degrees of London University in Mathematics** are offered at the following institutions:

Regent Street Polytechnic, Rutherford College of Technology, Portsmouth College of Technology, Kingston College of Technology, Rugby College of Engineering Technology, Paisley College of Technology.

(ii) UNIVERSITY DIPLOMAS AND CERTIFICATES

University of Belfast: Diploma in Numerical Mathematics. 1-year course for holders of pass degree in Mathematics, or equivalent.

University of Birmingham: Postgraduate Diplomas in Mathematical Physics and Mathematical Statistics. 1-year courses.

University of Cambridge: Diploma in Mathematical Statistics. 1 or 2 years. Diploma in Numerical Analysis and Automatic Computing. 1 year. Open to graduates of any university whose qualification is approved.

University of Edinburgh: 1-year diploma course in Applied Dynamics open to honours graduates in Mathematics, Physics or Engineering.

University of Glasgow: Postgraduate Diploma in Numerical Analysis. 1-year course.

University of London: Postgraduate Diploma in Mathematics. 1 year whole-time, 2 years part-time. Postgraduate Diploma in Numerical Analysis. 1 year whole-time, 2 years part-time.

Imperial College, London: Diploma (D.I.C.) courses in Mathematical Physics, Pure Mathematics, Applied Mathematics, Numerical Analysis, Mathematical Techniques of Operational Research.

University of Oxford: Diploma in Advanced Mathematics. 2-year course.

University of Wales (Bangor): Postgraduate Diploma in Mathematics. 1-year course. (**Swansea**): Diploma in Mathematical Statistics and Computational Analysis. 1-year postgraduate course. (**Aberystwyth**): Postgraduate Diploma in Pure Mathematics. 1-year course.

(iii) DEGREES OF THE NEW UNIVERSITIES AND DEGREES OF THE C.N.A.A.

Courses at the following former Colleges of Advanced Technology will now lead to degrees in mathematics, awarded by the new technological universities. The 4-year courses are normally sandwich, 3-year courses full-time. All colleges require 2 'A' level passes in mathematical subjects. Those that require a Physics pass are indicated (P).

Battersea C.A.T. B.Sc. (in Modern Mathematics or Technological Mathematics): 3 or 4 years.

Birmingham C.A.T. B.Sc. in Technological Mathematics: 4 years.

Bradford I.T. B.Tech. in Mathematics: 4 years (P).

Bristol C.S.T. B.Sc. in Mathematics: 4 years.

Brunel. B.Tech. in Mathematics: 4 years.

Chelsea C.S.T. B.Sc.: 3 years.

Heriot-Watt College. B.Sc. in Mathematics: 4 years.

Loughborough C.T. B.Tech. in Mathematics: 4 years.

Northampton C.A.T. B.Sc. in Mathematics: 3 years. (In Applied Mathematics): 4 years.

Salford C.A.T. B.Sc. (in Mathematics/Statistics and Mathematics/Numerical Analysis): 4 years.

Welsh C.A.T. B.Sc.(Tech.): 4 years (P).

The following courses will now lead to **degrees of the C.N.A.A.** The courses are 4-years sandwich. Entry qualification is Pure Mathematics at 'A' level and one other 'A' level pass in Applied Mathematics or Physics and three other 'O' level passes.

Enfield College of Technology (Mathematics for Business);
Hatfield College of Technology; Lanchester College of
Technology; Portsmouth College of Technology; Rutherford
College of Technology; Woolwich Polytechnic.

COLLEGE DIPLOMAS AND ASSOCIATESHIPS

College Diplomas and Associateships in Mathematics are awarded by the following institutions:

Brighton College of Technology, College Diploma in
Computing and Data Processing (3 years full-time);

Leicester College of Technology, College Diploma in Industrial Mathematics (4 years sandwich) and College Certificate in Industrial Mathematics (2 years full-time); Constantine College of Technology, College Diploma in Mathematics, Statistics and Computer Technology (2 years full-time); Southampton College of Technology, College Diploma in Mathematics (2 years sandwich); Wolverhampton and Staffordshire College of Technology, College Diploma in Computer Technology (3 years sandwich); Glamorgan College of Technology, College Diploma for Mathematics in Industry (3 years sandwich), College Associateship in Mathematics in Industry (4 years sandwich).

MEDICAL AUXILIARIES

Note. Also refer to entries for the individual professions, listed below.

STATE REGISTRATION

Under the Professions Supplementary to Medicine Act of 1960, certain medical auxiliaries are required to register with the Council for Professions Supplementary to Medicine before going into National Health or Local Authority practice.

The Council consists of several boards which administer registration for each profession. To be accepted for registration candidates must have completed a recognised course leading to the qualifications of their professional body.

The Council accepts for registration students who have successfully completed courses recognised by, and leading to the qualification of, the following professional bodies:

Chiropody: Society of Chiropodists; Institute of Chiropodists (provided that the candidates have practical experience).

Dietetics: British Dietetic Association.

Medical Laboratory Technology: Institute of Medical Laboratory Technology.

Occupational Therapy: Association of Occupational Therapists; Scottish Association of Occupational Therapists.

Physiotherapy: Chartered Society of Physiotherapists; Physiotherapists' Association (provided that the can-

didate has two years' experience in a recognised hospital);
Faculty of Physiotherapists.

Radiography: Society of Radiographers.

Remedial Gymnastics: Society of Remedial Gymnastics.

Orthoptics: British Orthoptic Board. (Legislation for inclusion of Orthoptics in the Council's list is, at the time of writing, before Parliament.)

MEDICAL SOCIAL WORK (ALMONING)

The Institute of Medical Social Workers

42, Bedford Square, London, W.C.1

Medical Social Workers, formerly called Almoners, are responsible for helping sick and disabled people and their families with problems created or exacerbated by illness. Qualified medical social workers are invited to register with, and take up membership of, the Institute of Medical Social Workers (formerly the Institute of Almoners).

Those whose names appear on the Register are entitled to call themselves **Associates of the Institute of Medical Social Workers (A.I.M.S.W.)**. Those who are registered may also, by subscription, become **Members** of the Institute: there are A and B Members, A Members being those who are actually working as medical social workers.

QUALIFICATION AS A MEDICAL SOCIAL WORKER

To qualify for registration, a candidate must be at least 22 years old and must hold a general qualification in Social Science and specialised professional training; or have taken a special combined course.

Basic qualification in Social Science. This basic course must include study of Psychology, Sociology, Social Philosophy, Social Administration, Social and Industrial History, Social Economics. It is desirable that the course include some fieldwork. The course may be a degree in Social Studies (Social Administration, Sociology); or a postgraduate diploma or certificate in Social Studies following a degree in any subject; or a non-graduate diploma or certificate in social studies (*see* Social Science, general section, page 982).

Professional qualification in Medical Social Work. Candidates who have obtained one of the qualifications listed above are

eligible for entry to a one-year course of full-time study in medical social work, run by the Institute or by a University. (It is possible for holders of the Certificate in Social Work of the Council for Training in Social Work to obtain admission to the Institute's own course, provided that they have attended a two-year course for the Certificate and have had two years' experience in Social Work.)

All courses are parallel and lead to one of the following qualifications:

The Institute of Medical Social Workers' Certificate.

Queen's University, Belfast: Certificate in Applied Social Studies.

University of Birmingham: Diploma in Social Work.

University of Bristol: Certificate in Applied Social Studies.

University of Edinburgh: Certificate in Medical Social Work.

University of Glasgow: Diploma in Applied Social Studies.

University of London, London School of Economics: Diploma in Applied Social Studies.

University of Newcastle upon Tyne: Certificate in Applied Social Studies.

University of Southampton: Diploma in Applied Social Studies.

University of St. Andrews: Certificate in Applied Social Studies.

University of Wales, Cardiff: Diploma in Applied Social Studies.

The Certificate of the Institute of Medical Social Workers.

The syllabus for this course is typical of the courses listed above and covers social casework, the field of medical social work, the dynamics of human behaviour and medical information. Classwork and fieldwork run concurrently with the fieldwork being carried out under the supervision of a qualified worker in a hospital or local authority health and welfare service.

Combined course in Social Studies with Professional Studies. A four-year course at the Bradford Institute of Technology (University of Bradford designate) leads to an honours degree in Applied Social Studies and includes a course of professional education in medical social work.

In future this kind of course is likely to be a common pattern of training.

MEDICINE

In order to qualify as doctors under the Medical Act, 1956, candidates must first obtain a primary degree or diploma entitling

them to provisional registration with the General Medical Council, which administers a register of those entitled to practise medicine, surgery and midwifery. Candidates must then serve satisfactorily for a year as resident house officers in approved hospitals before being fully registered and allowed to practise without supervision.

REGISTRABLE QUALIFICATIONS

Primary qualifications in Medicine, Surgery and Midwifery entitling the holder to provisional registration in accordance with Section 11 of the Medical Act, 1956, are as follows:

- (i) The conjoint first degree of Bachelor of Medicine and Bachelor of Surgery awarded by universities in the United Kingdom, the National University of Ireland and Trinity College, Dublin.
- (ii) The conjoint diplomas of Licence of the Royal College of Physicians of London and Member of the Royal College of Surgeons of England (L.R.C.P., M.R.C.S.) conferred by the conjoint examining board of the two Colleges (the English Conjoint Board); and the conjoint diplomas of Licence of the Royal College of Physicians of Edinburgh, the Royal College of Surgeons of Edinburgh and the Royal College (formerly Faculty) of Physicians and Surgeons of Glasgow (L.R.C.P.Edin., L.R.C.S.Edin., L.R.C.P.S.Glasg.) conferred by the conjoint examining board of the three Colleges (the Scottish Conjoint Board).
- (iii) The diploma of Licence in Medicine, Surgery and Midwifery of the Worshipful Society of Apothecaries of London (L.M.S.S.A.).
- (iv) The diplomas of Licence of the Royal College of Physicians of Ireland (L.R.C.P.I.) and the Royal College of Surgeons in Ireland (L.R.C.S.I.).

(i) UNIVERSITY FIRST DEGREES

The first degrees of the following universities in medicine and surgery are registrable qualifications:

Aberdeen. M.B., Ch.B.: 5 or 6 years. Candidates who have 3 S.C.E. Higher grade passes in Physics, Chemistry and Biology (or Botany and Zoology) may be admitted to a 5-year course; candidates with 2 Higher grade passes (which may be in arts subjects) may be admitted to a 6-year course.

Belfast. M.B., B.Ch., B.A.O. (Bachelor of Obstetrics): 6 years. Candidates should have G.C.E. 'A' level passes in Physics and Chemistry, and an 'O' level pass in Mathematics; additional 'A' level passes in arts subjects are desirable.

Birmingham. M.B., Ch.B.: 5 or 6 years. Candidates who have 3 G.C.E. 'A' level passes, including Physics and Chemistry and either Biology or Zoology, normally obtained at the same sitting, may be admitted to a 5-year course; candidates with 2 G.C.E. 'A' level passes (which may be in arts subjects) may be admitted to a 6-year course.

Bristol. M.B., Ch.B.: 5 or 6 years. Candidates with 2 G.C.E. 'A' level passes, including Chemistry and either Biology or Zoology, with Physics and either Biology or Zoology at 'O' level, may be admitted to a 5-year course; candidates with 2 G.C.E. 'A' level subjects, which may be in arts, and with Mathematics and an approved science subject at 'O' level, may be admitted to a 6-year course.

Cambridge. M.B., B.Chir.: 6 years. Candidates should satisfy the general University requirement.

Edinburgh. M.B., Ch.B.: 6 years. Candidates should have 3 S.C.E. Higher grade passes, preferably including Physics and Chemistry; applicants with good passes in Chemistry, Physics and Biology may be admitted to a 5-year course.

Glasgow. M.B., Ch.B.: 6 years. Candidates should have 3 S.C.E. Higher grade passes, preferably including Physics and Chemistry; applicants with passes in Chemistry, Physics and Biology (or Botany and Zoology) may be admitted to a 5-year course after an *ad hoc* examination.

Leeds. M.B., Ch.B.: 5 or 6 years. Candidates with 3 G.C.E. 'A' level passes, including Physics and Chemistry, and Biology or Zoology, with an 'O' level pass in Mathematics, may be admitted to a 5-year course; candidates with 2 'A' level passes (which may be in arts subjects) and Mathematics, Chemistry and Physics at 'O' level may be admitted to a 6-year course.

Liverpool. M.B., Ch.B. (plus B.Sc. Hons. in certain cases): 5 or 6 years. Candidates with 3 G.C.E. 'A' level passes, including Physics and Chemistry, and Biology or Zoology, may be admitted to a 5-year course; candidates with 2 'A' level passes, which may be in arts subjects, may be admitted to a 6-year course. Students whose performance in the second M.B. Part II examination is of a good enough standard may be permitted to intercalate an extra year of study for the B.Sc. Honours degree in Biochemistry, Anatomy or Physiology.

London. M.B., B.S.: Courses are offered at the following medical schools:

Charing Cross Hospital: $4\frac{1}{2}$ years. Candidates should have 3 G.C.E. 'A' level passes, including Physics and Chemistry.

Guy's Hospital: $4\frac{1}{2}$ or $5\frac{1}{2}$ years. Candidates with 3 G.C.E. 'A' level passes, including Physics and Chemistry, may be admitted to a $4\frac{1}{2}$ -year course; candidates with 2 'A' level passes, which may be in arts subjects, may be admitted to a $5\frac{1}{2}$ -year course.

London Hospital: $4\frac{1}{2}$ or 5 years. Candidates should have 3 G.C.E. 'A' level passes, including Physics and Chemistry.

Middlesex Hospital: $4\frac{1}{2}$ or $5\frac{1}{2}$ years. Candidates with 3 G.C.E. 'A' level passes, including Physics and Chemistry, may be admitted to a $4\frac{1}{2}$ -year course. Candidates with 2 'A' level passes, which may be in arts subjects, may be admitted to a $5\frac{1}{2}$ -year course.

Royal Free Hospital: $4\frac{1}{2}$ or $5\frac{1}{2}$ years. Candidates with 3 G.C.E. 'A' level passes, including Physics and Chemistry, may be admitted to a $4\frac{1}{2}$ -year course; candidates with 3 G.C.E. 'A' level passes, which may be in arts subjects but accompanied by an 'O' level pass in a science subject as well as in Mathematics, may be admitted to a $5\frac{1}{2}$ -year course.

St. Bartholomew's Hospital: 5 or 6 years. Candidates with 3 G.C.E. 'A' level passes, including Physics and Chemistry, may be admitted to a 5-year course; candidates with 2 'A' level passes, which may be in arts subjects, may be admitted to a 6-year course.

St. Mary's Hospital: $4\frac{1}{2}$ or $5\frac{1}{2}$ years. Candidates with 3 G.C.E. 'A' level passes, including Physics and Chemistry, may be admitted to a $4\frac{1}{2}$ -year course; candidates with 2 'A' level passes, which may be in arts subjects, may be admitted to a $5\frac{1}{2}$ -year course.

St. Thomas's Hospital: $4\frac{1}{2}$ or $5\frac{1}{2}$ years. Candidates with 3 G.C.E. 'A' level passes, including Physics and Chemistry, may be admitted to a $4\frac{1}{2}$ -year course; candidates with 3 'A' level passes, which may be in arts subjects, with Mathematics at 'O' level, may be admitted to a $5\frac{1}{2}$ -year course.

King's College: $4\frac{1}{2}$ years. Candidates should have 3 G.C.E. 'A' level passes, including Physics and Chemistry. The clinical course is taken at King's College Hospital Medical School, St. George's Hospital Medical School or Westminster Medical School.

University College: $4\frac{1}{2}$ years. Candidates should have 3 G.C.E. 'A' level passes, including Physics and Chemistry. The clinical course is usually taken at University College Hospital Medical School.

Manchester. M.B., Ch.B.: 5 or 6 years. Candidates with 3 G.C.E. 'A' level passes, including Physics and Chemistry and Bio-

logy or Zoology or Mathematics, may be admitted to a 5-year course; candidates with 3 'A' level passes, which may be in approved arts subjects, may be admitted to a 6-year course.

Newcastle. M.B., B.S.: 5 or 6 years. Candidates with 3 G.C.E. 'A' level passes, including Physics and Chemistry and Biology or Zoology, may be admitted to a 5-year course; candidates with 2 'A' level passes, which may be in arts subjects but must be accompanied by Mathematics and an approved science at 'O' level, may be admitted to a 6-year course.

Oxford. B.M., B.Ch.: 6 years, after the first three of which candidates must obtain the B.A. by gaining Honours in certain of the subjects being studied concurrently for the B.M. Candidates must satisfy the general University requirement.

St. Andrews. M.B., Ch.B.: 6 years. Candidates should have at least 2 S.C.E. Higher grade passes; applicants with good passes in Physics, Chemistry and Biology may be admitted to a 5-year course.

Sheffield. M.B., Ch.B.: 5 or 6 years. Candidates with 3 G.C.E. 'A' level passes, including Physics and Chemistry, may be admitted to a 5-year course; candidates with 3 G.C.E. 'A' level passes, which may be in arts subjects, and 'O' level passes in Physics, Chemistry and Biology, may be admitted to a 6-year course.

Wales (Cardiff). M.B., B.Ch.: 5 or 6 years. Candidates with 3 G.C.E. 'A' level passes may be admitted to a 5-year course. The clinical course is taken at the Welsh National School of Medicine.

(ii) QUALIFICATIONS AWARDED BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS

Licence of the Royal College of Physicians of London and the Diploma of Membership of the Royal College of Surgeons of England (L.R.C.P.Lond., M.R.C.S.Eng.). The Licence and the Diploma are conferred jointly by the Royal College of Physicians of London and the Royal College of Surgeons of England, the examinations being conducted by the English Conjoint Board (Examination Hall, 8 to 11, Queen Square, London, W.C.1; Secretary: F. Morgan Stent). The Licence and the Diploma are not granted separately.

THE EXAMINATIONS

Candidates are required to pass two examinations:

The First Professional Examination in Anatomy and Physiology conducted by or recognised by the English Conjoint Board.

The Final Examination in Pathology and Bacteriology, Medicine, Surgery, Midwifery and Gynaecology.

Before being allowed to take the First Professional Examination candidates must produce evidence that they have passed examinations in general education and in physics, chemistry and biology or zoology entitling them to take the medical course at a medical school recognised by the English Conjoint Board for the purpose (*see below*). Candidates are required to take the medical course at recognised medical schools and hospitals; normally they take it at the same time as a degree course, as medical schools accept only degree candidates.

The British universities and licensing bodies recognised in respect of the curriculum of professional education and examinations are as follows:

Aberdeen; Queen's University, Belfast; Birmingham; Bristol; Cambridge; Edinburgh; Glasgow; Leeds; Liverpool; London (Charing Cross, Guy's, King's College, the London, Middlesex, Royal Free, St. Bartholomew's, St. George's, St. Mary's, University College and Westminster Medical Schools); Manchester; Newcastle; Oxford; St. Andrews; Sheffield; Wales; Royal Corporations of Scotland.

Diplomas of the Royal College of Physicians of Edinburgh, the Royal College of Surgeons of Edinburgh and the Royal College of Physicians and Surgeons of Glasgow (formerly the Royal Faculty of Physicians and Surgeons of Glasgow) (L.R.C.P. Edin., L.R.C.S. Edin., L.R.C.P.S. Glasg. (formerly L.R.F.P.S. Glasg.).

The Triple Qualification of the three Scottish Colleges, the examinations for which are conducted by the Scottish Conjoint Board (18, Nicolson Street, Edinburgh, 8), qualifies the holder for admission to the Medical Register (*see above*, page 793). Each of the Colleges also grants its Single Diploma after examination, but Single Diplomas do not confer the right to registration. (The only other examination run by the Scottish Conjoint Board is for the additional qualification of Diploma in Psychological Medicine.)

Candidates for the Triple Qualification must take a course of professional education lasting not less than five years; before admission to the course they must have passed a recognised preliminary examination in general education and an examination, conducted or recognised by the Scottish Conjoint Board, in physics, chemistry and biology. The course of professional education may be taken at establishments whose qualifications are registrable under the Medical Acts.

There are three professional examinations, the First, Second and Final.

The First Examination, which is written, practical and oral, covers Anatomy and Embryology, Physiology, including Histology (if not included in Anatomy), Biochemistry and Biophysics.

The Second Examination, which is written, practical and oral, covers Pathology, including Bacteriology and Morbid Anatomy, Materia Medica and Pharmacology, including Pharmacological Chemistry, and the principles of Therapeutics.

The Final Examination is in two parts. The First Part consists of Forensic Medicine and Social Medicine, with Public Health. The Second Part consists of Medicine, including Therapeutics, applied Anatomy and Physiology, and clinical Pathology with clinical Medicine; Surgery, including applied Anatomy and Physiology, clinical Pathology with clinical Surgery; and Midwifery and diseases of women, clinical Midwifery and Gynaecology, with practical Midwifery. There are also oral and clinical examinations.

Candidates may be exempted from the First and Second Examinations, but all candidates must take the Final Examination in Forensic Medicine, Public Health, Medicine, Surgery and Midwifery.

- (iii) SOCIETY OF APOTHECARIES OF LONDON (incorporated 1617), Apothecaries Hall, Black Friars Lane, London, E.C.4. (Registrar: Ernest Busby)

Diploma in Medicine, Surgery and Midwifery (L.M.S.S.A. Lond.). The course lasts five years. The examinations are the Primary and Final. The Primary examination, which covers anatomy, physiology and biochemistry, is taken after five terms; the Final examination, which covers the principles and practice of medicine, surgery and midwifery and gynaecology, pathology and bacteriology, is taken three years after the Primary examination. Before becoming eligible for full registration with the General Medical Council Licentiates must complete a year's satisfactory service as House Officers.

A course for the Licence may be taken at the following universities:

Aberdeen; Queen's University, Belfast; Birmingham; Bristol; Cambridge; Edinburgh; Glasgow; Leeds; Liverpool; London (Charing Cross, Guy's, King's College, the London, Middlesex, Royal Free, St. Bartholomew's, St. George's, St. Mary's, St. Thomas's, University College and Westminster Medical Schools); Manchester; Newcastle; Oxford; St. Andrews; Sheffield; Wales.

SUMMARY OF PRIMARY REGISTRABLE QUALIFICATIONS GRANTED BY
LICENSING BODIES IN THE UNITED KINGDOM AND IRELAND

Licensing Body	Qualifications	Designatory Letters
University of Aberdeen	Bachelor of Medicine, Bachelor of Surgery	M.B., Ch.B. U.Aberd.
Queen's University, Belfast	Bachelor of Medicine, Bachelor of Surgery	M.B., B.Ch. Q.U.Belf.
University of Birmingham	Bachelor of Medicine, Bachelor of Surgery	M.B., Ch.B. U.Birm.
University of Bristol	Bachelor of Medicine, Bachelor of Surgery	M.B., Ch.B. U.Brist.
University of Cambridge	Bachelor of Medicine, Bachelor of Surgery	M.B., B.Chir. U.Camb.
University of Durham	Bachelor of Medicine, Bachelor of Surgery	M.B., B.S. U.Durh.
University of Edinburgh	Bachelor of Medicine, Bachelor of Surgery	M.B., Ch.B. U.Edin.
University of Glasgow	Bachelor of Medicine, Bachelor of Surgery	M.B., Ch.B. U.Glasg.
University of Leeds	Bachelor of Medicine, Bachelor of Surgery	M.B., Ch.B. U.Leeds
University of Liverpool	Bachelor of Medicine, Bachelor of Surgery	M.B., Ch.B. U.Lpool.
University of London	Bachelor of Medicine, Bachelor of Surgery	M.B., B.S. U.Lond.
University of Manchester	Bachelor of Medicine, Bachelor of Surgery	M.B., Ch.B. U.Manc.
University of Newcastle	Bachelor of Medicine, Bachelor of Surgery	M.B., Ch.B. U.Ncle.
University of Oxford	Bachelor of Medicine, Bachelor of Surgery	B.M., B.Ch. U.Oxf.
University of St. Andrews	Bachelor of Medicine, Bachelor of Surgery	M.B., Ch.B. U.St.And.
University of Sheffield	Bachelor of Medicine, Bachelor of Surgery	M.B., Ch.B. U.Sheff.
University of Wales	Bachelor of Medicine, Bachelor of Surgery	M.B., B.Ch. U.Wales
National University of Ireland	Bachelor of Medicine, Bachelor of Surgery	M.B., B.Ch. N.U.Irel.
Trinity College, Dublin	Bachelor of Medicine, Bachelor of Surgery; Licence in Medicine, Licence in Surgery	M.B., B.Ch., L.Med., L.Ch., U.Dubl.
Royal College of Physi- cians of London	Licentiate	L.R.C.P., M.R.C.S.
Royal College of Surgeons of England	Membership	
Royal College of Physi- cians of Edinburgh	Licentiate	L.R.C.P.Edin.,
Royal College of Surgeons of Edinburgh	Licentiate	L.R.C.S.Edin.,
Royal College of Physi- cians and Surgeons of Glasgow	Licentiate	L.R.C.P.S.Glasg.
Society of Apothecaries of London	Licence in Medicine, Surgery and Midwifery	L.M.S.S.A.Lond.
Royal College of Physicians of Ireland	Licentiate and Licentiate in Midwifery	L.R.C.P.I., L.M.R.C.P.I.
Royal College of Surgeons in Ireland	Licentiate and Licentiate in Midwifery	L.R.C.S.I., L.M.R.C.S.I.

HIGHER QUALIFICATIONS

Medical practitioners who hope to become consultants or specialists need to obtain additional registrable qualifications — a higher degree or a diploma of Member or Fellow (as the case may be) of one of the Royal Colleges — or a postgraduate diploma (*see below*).

Additional qualifications registrable in accordance with the Medical Act, 1956, are as follows:

- (i) Higher degrees in medicine, surgery and other subjects (usually the degrees of Doctor of Medicine and Master of Surgery) awarded by universities in the United Kingdom, the National University of Ireland and Trinity College, Dublin;
- (ii) Membership of the Royal Colleges of Physicians of Edinburgh, Glasgow or London;
- (iii) Fellowship of the Royal Colleges of Surgeons of England or Edinburgh or of the Royal College (formerly Faculty) of Physicians and Surgeons of Glasgow;
- (iv) Membership and Fellowship of the Royal College of Physicians of Ireland; and Fellowship of the Royal College of Surgeons in Ireland.

(i) HIGHER DEGREES

The higher degrees most commonly awarded by the universities after an examination and/or thesis are those of **Doctor of Medicine** and **Master of Surgery**, the latter being usually the senior degree. Medical graduates may also take the degrees of **Master of Science** and **Doctor of Philosophy**. Higher degrees are awarded by each of the British university licensing bodies as follows:

Aberdeen. M.D.; Ch.M.: Candidates, who must be not less than 24 years of age, may be admitted to either degree by examination and thesis, one year after taking their first degree.

Belfast. M.D.; M.Ch.; M.A.O. (Master of Obstetrics): These degrees are open, by examination or thesis, to medical graduates of three years' standing.

Birmingham. M.D.; Ch.M.; Ph.D.; M.Sc. (Radiobiology): Candidates may be admitted to either medical degree five years after taking their first degree; graduates of approved universities other than Birmingham must do two years' research at Birmingham. The M.Sc. degree in Radiobiology is taken after a one-year full-time course by candidates with approved medical or scientific qualifications.

Bristol. M.D.; Ch.M.: Candidates may be admitted to either degree two years after taking their first degree.

Cambridge. M.D.; M.Chir.: Candidates may be admitted to the Master's degree by examination two years after taking their medical degree, but this period will be raised to five years in 1967. Candidates may be admitted to the Doctor's degree eight years after taking their first medical degree.

Edinburgh. M.D.; Ch.M.; Ph.D.: Candidates may be admitted to the medical Doctor's degree by thesis and examination, if required, two years after taking their first medical degree and to the Master's degree by thesis and examination five years after taking their first degree.

Glasgow. M.D.; Ch.M.; D.Sc. (in public health): Candidates may be admitted to either medical degree by thesis and examination, if required, two years after taking their first medical degree. Candidates for the D.Sc. must present a thesis and take an examination.

Leeds. M.D.; Ch.M.; Ph.D.: Candidates may be admitted to the medical Doctor's degree three years after taking their first degree and to the Master's degree five years after taking their first degree.

Liverpool. Ch.M.; M.D.; Master of Orthopaedic Surgery (M.Ch.Orth.); Master of Oto-Rhino-Laryngological Surgery (M.Ch.Otol.); Master of Radiology (M.Rad.).

The degree of **Master of Surgery** is open to holders of a diploma of Fellowship of one of the Royal Colleges of Surgeons who are medical graduates and to graduates in subjects other than medicine who hold a registrable qualification; candidates are required to submit a thesis and to take an examination.

The Doctor's degree may be taken two years after the first medical degree by submission of a thesis and by oral examination on the subject of the thesis; candidates may submit copies of original papers on Medical Science if they wish. Alternatively, candidates may take the degree by examination five years after their first medical degree; the examination is in both General Medicine and a selected branch of Medicine.

The degree of **Master of Orthopaedic Surgery** is open, after a course lasting at least a year, to medical graduates and to graduates in subjects other than medicine who hold a diploma of Fellowship of one of the Royal Colleges of Surgeons or who are surgeon Fellows of the Royal College of Physicians and Surgeons of Glasgow. Candidates are required to submit a thesis and to take an examination.

The degree of **Master of Oto-Rhino-Laryngological Surgery** is open to medical graduates or to other graduates who hold a registrable qualification. Candidates who are Fellows of one of the

Royal Colleges of Surgeons are required to submit a thesis; candidates who hold the Diploma in Laryngology and Otology of the Royal College of Surgeons of England are required to take an examination. Candidates must take a two-year course of work and lectures. The degree is awarded not less than five years after candidates have taken their first medical degree or qualification.

The degree of **Master of Radiology** may be awarded in Radiodiagnosis or Radiotherapy. It is open to candidates who hold the University's Diploma in Radiology (D.M.R.(D) or (T.)), not less than two years after they have taken it. Candidates are required to submit a thesis.

London. M.D.; M.S.; Ph.D.; M.Sc. in (i) Radiation Biology and Radiation Physics and (ii) Radiation Physics. The medical Doctor's degree is open to London medical graduates, not less than seven years (four in certain exceptional cases), after obtaining full qualification as medical practitioners. Candidates are required to submit a thesis. The medical Master's degree is open to London medical graduates not less than five years after taking their first degree; candidates are required to submit a thesis. The two M.Sc. degrees are awarded after two-year courses; for the first candidates must have an approved medical or scientific qualification, for the second an approved degree in Physics.

Manchester. M.D.; Ch.M.: The Doctor's degree is open to candidates four years after taking their first degree and the Master's degree five years after taking their first degree.

Newcastle. M.D.; M.S.; Doctor of Hygiene (D.Hy.): The medical Doctor's degree is open by thesis and oral examination to candidates two years after taking their first degree, the Master's degree by thesis and oral examination after five years and the degree of D.Hy. six years after, by thesis or published work and oral examination, if required.

Oxford. M.Ch.; D.M.: These degrees are open only to Oxford graduates of many years' standing. For the Master's degree candidates must pass a written and practical examination on the principles and practice of surgery and submit a thesis on an approved subject. For the Doctor's degree candidates must submit a thesis or a published work on an approved subject connected with medicine.

St. Andrews. M.D.; Ch.M.: Candidates, who must be not less than 24 years of age, may be admitted to either degree by thesis and examination one year after taking their first degree.

Sheffield. M.D.; Ch.M.: The Doctor's degree may be taken by thesis and examination, if an examination is called for, by

medical graduates of two years' standing. The Master's degree may be taken three years after the first degree by examination.

Wales. M.D.; M.Ch.: The Doctor's degree may be taken by thesis and examination four years after qualifying and the Master's degree by thesis four years after qualifying.

(ii) AWARDS OF THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS

The Royal College of Physicians of Edinburgh (9, Queen Street, Edinburgh, 2) awards the following higher qualifications:

Fellow of the Royal College of Physicians of Edinburgh (F.R.C.P.Edin.). Fellows are elected from among the Members of the Royal College.

Membership (M.R.C.P.Edin.). Candidates for the Membership examination must hold an approved medical qualification and have been fully qualified for at least three years. Their candidature must be supported by a Fellow of the College or by two testimonials from well-known members of the profession certifying as to their professional standing and character.

The examination is in three parts. Part I consists of a written paper in basic sciences, Medicine and Therapeutics. Part II consists of written papers in applied basic sciences, Medicine and Therapeutics and in a branch of Medicine selected by the candidate and approved by the Council of the College; practical examinations in Clinical Medicine and the selected subject; oral examinations in Medicine and Therapeutics and the selected subject.

Selected subjects which are at present acceptable to the Council of the College include:

Alimentary diseases; Anaesthesia; Anatomy; Bacteriology; basic sciences*; Biochemistry; Cardiology; child life and health; Clinical Chemistry; Dermatology; disorders of the blood; Endocrinology; Forensic Medicine; Geriatrics; infectious diseases; medical disorders of the locomotory system; Medical Ophthalmology; Neurology; Obstetrics and Gynaecology; Pathology; Pharmacology; Physiology; Psychiatry; Public Health and Social Medicine; Radio-diagnosis; Radiotherapy; Renal Physiology and Renal disease; Respiratory diseases and Tuberculosis; Tropical Medicine (including Tuberculosis); Venereal diseases.

* This subject will comprise the medical aspects of anatomy, physiology and biochemistry.

Candidates may apply to the Council for permission to offer any other branch of medicine as a selected subject.

For the **Licentiate (L.R.C.P.Edin.)**, see above, page 797.

The Royal College of Physicians and Surgeons of Glasgow (formerly the Royal Faculty of Physicians and Surgeons of Glasgow) (242, St. Vincent Street, Glasgow, C.2) awards the following qualifications (for awards in Dentistry, *see* page 607).

Membership (M.R.C.P.Glasg.). Candidates for the Membership examination must have been qualified for at least three years, one of which should have been spent in full-time clinical work in a hospital approved by the Council of the College and one other year in medical work approved by the Council of the College. The examination consists of such written, clinical and oral examinations as the Council may decide.

Fellowship (F.R.C.S.Glasg.). There are two examinations, Primary and Final. In the final examination candidates may specialise in Obstetrics and Gynaecology, or Ophthalmology or Otolaryngology. Candidates must have qualifications recognised by the Council of the College.

The primary examination consists of a written and oral examination in Anatomy, Physiology, and Pathology and Bacteriology. Candidates who have passed a comparable examination may be exempted.

Candidates for the final examination must produce evidence of character and professional status and have been qualified for three or more years. They should have had four years' professional experience as stipulated below and must pass an examination—written, clinical and oral—in their chosen special subject.

Obstetrics and Gynaecology. Candidates should have one year's experience in house officer posts before registration, one year's experience of clinical work in general surgery, one year's experience of clinical work in obstetrics and one year's experience of clinical work in gynaecology. The final examination covers the principles of surgery, obstetrics and gynaecology.

Ophthalmology. The first two years' experience should be the same as above. The third year's experience should have been obtained in approved surgical appointments and the fourth in clinical ophthalmology. The final examination covers the principles of surgery and ophthalmology.

Otolaryngology. The first three years' experience are comparable with those for ophthalmology. The fourth year's experience should have been obtained in clinical otolaryngology. The final examination covers the principles of surgery and otolaryngology.

For the **Licentiatehip (L.R.C.P.S.Glasg.)**, *see above*, page 797.

Diploma in Child Health (D.C.H.). Candidates for the Diploma in Child Health must have registrable qualifications or have degrees approved by the Council of the College. They are also required to have had six months' residence as a medical officer in a recognised children's hospital or the children's department of a recognised general hospital; or to have taken a six-month full-time or a twelve-month part-time course in such a hospital or department, together with clinical instruction.

Diploma in Industrial Health (D.I.H.). Candidates for the Diploma in Industrial Health must have registrable qualifications or have degrees approved by the Council of the College. The examination is in two parts and Part I may not be taken until the candidate has been qualified for two years; candidates who hold a Diploma in Public Health may be exempted from Part I.

Diploma in Psychological Medicine (D.P.M.). The College conducts the examinations for the Diploma in Psychological Medicine conferred by the Scottish Conjoint Board. Candidates should have registrable qualifications or qualifications recognised by the Board. The examination is in two parts; Part I may not be taken until the candidate has been qualified for one year (including a six months' medical appointment). Candidates for Part II should have had two years' approved experience in a psychiatric hospital, including three months' full-time or six months' part-time attendance in an in- or out-patient department for neurological cases.

The Royal College of Physicians of London (11, St. Andrew's Place, London, N.W.1) awards the following qualifications:

Fellowship (F.R.C.P.Lond.). Fellows are elected from among Members of the Royal College of at least four years' standing.

Membership (M.R.C.P.Lond.). Candidates for admission to the Membership examination must be at least 23 and have been qualified as medical practitioners for at least 18 months. They are required to produce two testimonials from Fellows or Members of the College concerning their character, ability and training; Members signing testimonials must be of at least four years' standing and in active practice.

The examination is in three parts. Part I is a written qualifying examination. Part II, to which candidates successful in Part I are admitted, consists of a written paper, a clinical and an oral examination in general medicine. Candidates who have taken Part II successfully may be exempted from Part III and admitted to Membership or allowed to enter for Part III. Part III, which must be taken not less than three months after Part II, may be taken in General Medicine, Psychiatry or Paediatrics.

The examination in General Medicine consists of a clinical and an oral examination; in Psychiatry of a written paper, clinical and oral tests; and in Paediatrics of a clinical and an oral examination.

For the **Licentiate (L.R.C.P.Lond.)**, *see above*, page 796.

The Royal College of Surgeons of Edinburgh (18, Nicolson Street, Edinburgh, 8) awards the following qualifications:

Fellowship (F.R.C.S.Edin.). Persons of eminence in the profession may be elected to Fellowship, but the grade is normally entered on election after the successful completion of an examination.

The examination is in two parts.

Part I consists of written papers and oral examinations in each of the subjects Anatomy, Physiology and Pathology (including Bacteriology) as they are applied to the field of Surgery.

Part II is in two divisions. Division A consists of a written paper, a clinical or a practical examination and an oral examination on the principles and practice of Surgery and on an optional subject to be selected by the candidates from among:

Surgical Pathology and operative Surgery; Laryngology, Otology and Rhinology; Obstetrics and Gynaecology.

Division B consists of an examination in Ophthalmology, in two parts. Part I is identical with the Part I examination described above. Part II consists of (i) a written and oral examination including the following subjects in their application to Clinical Ophthalmology:

Anatomy and Embryology of the visual apparatus; Physiology of the visual apparatus; Optics; Pathology and Bacteriology.

(ii) a clinical and oral examination on diseases of the eye and Ophthalmic Surgery.

(iii) a written examination on Ophthalmic Medicine and Surgery, including Ophthalmology in relation to General Medicine.

(iv) a clinical and oral examination on Ophthalmology in relation to General Medicine.

Qualifications of candidates. Candidates must be fully qualified before admission to Part I. Candidates who have passed Part I or a comparable examination must have had three years' professional experience and have spent one year in resident appointments in an approved general hospital.

Candidates for the examination in ophthalmology must be fully qualified before admission to Part I. Candidates who have passed Part I or a comparable examination must have had at least six months' experience as a house surgeon (other than in Ophthal-

mology) or as a house physician or in general practice and have had $2\frac{1}{2}$ years' experience in Ophthalmology (including two years in approved hospitals).

For the **Licentiate (L.R.C.S.Edin.)**, *see above*, page 797.

The Royal College of Surgeons of England (Lincoln's Inn Fields, London, W.C.2). The principal examining body of the Royal College of Surgeons of England is the Court of Examiners, which examines for the Fellowship, F.R.C.S.(Eng.), and the Membership, M.R.C.S.(Eng.). The diploma of Membership is granted conjointly with the Licence of the Royal College of Physicians of London, for which purpose and others the two Colleges form the English Conjoint Examining Board.

The Board also grants specialist postgraduate diplomas in the following subjects:

Anaesthetics; Child Health; Industrial Health; Medical Radiodiagnosis and Radiotherapy; Otolaryngology; Ophthalmology; Pathology; Physical Medicine; Psychological Medicine; Public Health; Tropical Medicine.

The postgraduate educational work of the College is directed by the Council and is conducted in co-operation with the Faculty of Dental Surgery, the Faculty of Anaesthetists, the Institute of Basic Medical Sciences (the College and the British Postgraduate Medical Federation of the University of London), the Joint Committee for Postgraduate Orthopaedic Training and the Joint Committee for Plastic Surgery.

The Royal College of Surgeons is responsible for the award of the following qualifications (for awards in Dentistry, *see* page 603).

Membership (M.R.C.S.Eng.). This is part of the conjoint qualification L.R.C.P., M.R.C.S. (*see* page 796).

Fellowship (F.R.C.S.Eng.). Candidates for the Fellowship examination must have registrable medical qualifications or qualifications accepted by the Council of the College. The diploma of Fellowship may not be awarded to candidates under 25, although candidates below that age may take the Final Examination.

The examination is in two parts, Primary and Final. Candidates who are Fellows of other Royal Colleges may be exempted from the Primary Examination. The Primary Examination, which is partly written and partly oral, covers anatomy, applied physiology and the principles of pathology.

In the Final Examination candidates may specialise in surgery (including surgical anatomy and pathology) or in ophthalmology (with special anatomy, physiology, pathology and such medicine and surgery as is related to ophthalmology) or in otolaryngology

(with special anatomy, physiology and pathology, and such general and specialist surgery as is related to otolaryngology).

All candidates must have been qualified for at least four years and have had six months' experience in resident appointments in general surgery. The requirements for the three specialisms are as follows*:

General Surgery. Candidates should have had six months' experience in an accident or emergency surgery appointment; twelve months' surgical experience, including six months in a major surgical specialism; twelve months' experience in General Surgery with the status of registrar.

Ophthalmology. Candidates should have had six-month appointments in Medicine (resident), Ophthalmology (resident) and either in Ophthalmology or General Surgery or a discipline related to Ophthalmology; twelve months' experience in Ophthalmology with the status of registrar.

Otolaryngology. Candidates should have had six-month appointments in Medicine (resident), General Surgery or a major surgical specialism and in Otolaryngology (resident); twelve months' experience in Otolaryngology with the status of registrar, six months of which should have been in Otolaryngology.

***Note.** Candidates' experience must be approved by the College and at least one year of it must normally have been obtained in the British Isles. The requirements set out above relate to candidates taking the examination for the first time in May 1967, except that the second requirement in General Surgery (12 months' surgical experience) and the last requirement in Ophthalmology and Otolaryngology relate to candidates taking the examination for the first time in May 1968.

Fellowship in the Faculty of Anaesthetists (F.F.A.R.C.S. Eng.). Candidates for the Fellowship examination must have registrable qualifications or qualifications accepted by the Council of the College. The diploma of Fellowship may not be awarded to candidates under 25, although candidates below that age may take the Final Examination.

The examination is in two parts, Primary and Final. Candidates who are Fellows of other Royal Colleges may be exempted from the Primary Examination. The Primary Examination, which is written and oral, covers Anatomy and Pathology, Physiology and Pharmacology.

The Final Examination, which is written, oral and clinical, covers Anaesthesia and Analgesia, including pre-operative and post-operative care, Medicine and Surgery, and the application of the basic sciences, including Chemistry and Physics, to the specialism of Anaesthetics.

Candidates for the Final Examination must have held clinical house appointments, other than in Anaesthetics, for at least one year in a recognised hospital and have completed not less than 18 months' full-time appointments in Anaesthetics in a recognised hospital. They should also have been qualified for not less than three years.

Fellowship in the Faculty of Radiologists (F.F.R.R.C.S. Eng.). Candidates for admission to the Fellowship examination must be registered medical practitioners and have been in practice for five years, hold a qualification in Radiology approved by the Council, have spent at least one year in general clinical work at hospitals approved by the Board of the Faculty and have held radiological appointments approved by the Board of the Faculty in which they have been exclusively engaged in the practice of Radiology for at least three years, two of them after obtaining their approved qualification in Radiology.

Candidates must pass an honours standard examination in Radio-diagnosis or Radiotherapy and a pass standard examination in General Medicine, General Surgery and Pathology. The examination in each subject is written, oral and clinical. Candidates with approved medical or surgical qualifications may be exempted from the examinations in General Medicine, General Surgery and Pathology.

SUMMARY OF ADDITIONAL REGISTRABLE QUALIFICATIONS GRANTED BY
LICENSING BODIES IN THE UNITED KINGDOM AND IRELAND

<u>Licensing Body</u>	<u>Qualification</u>	<u>Designatory Letters</u>
University of Aberdeen	Doctor of Medicine, Master of Surgery	M.D., Ch.M. U.Aberd.
Queen's University, Belfast	Doctor of Medicine, Master of Surgery, Master of Obstetrics	M.D., M.Ch., M.A.O. Q.U.Belf.
University of Birmingham	Doctor of Medicine, Master of Surgery	M.D., Ch.M. U.Birm.
University of Bristol	Doctor of Medicine, Master of Surgery	M.D., Ch.M. U.Brist.
University of Cambridge	Doctor of Medicine, Master of Surgery	M.D., M.Chir. U.Camb.
University of Durham	Doctor of Medicine, Master of Surgery	M.D., M.S. U.Durh.
University of Edinburgh	Doctor of Medicine, Master of Surgery	M.D., Ch.M. U.Edin.

<u>Licensing Body</u>	<u>Qualification</u>	<u>Designatory Letters</u>
University of Glasgow	Doctor of Medicine, Master of Surgery	M.D., Ch.M. U.Glasg.
University of Leeds	Doctor of Medicine, Master of Surgery	M.D., Ch.M. U.Leeds
University of Liverpool	Doctor of Medicine, Master of Surgery, Master of Orthopaedic Surgery	M.D., Ch.M., M.Ch. Orth. U.Lpool.
University of London	Doctor of Medicine, Master of Surgery	M.D., M.S. U.Lond.
University of Manchester	Doctor of Medicine, Master of Surgery	M.D., Ch.M. U.Manc.
University of Newcastle	Doctor of Medicine, Master of Surgery	M.D., Ch.M. U.Ncle.
University of Oxford	Doctor of Medicine, Master of Surgery	D.M., M.Ch. U.Oxf.
University of St. Andrews	Doctor of Medicine, Master of Surgery	M.D., Ch.M. U.St.And.
University of Sheffield	Doctor of Medicine, Master of Surgery	M.D., Ch.M. U.Sheff.
University of Wales	Doctor of Medicine, Master of Surgery	M.D., Ch.M. U.Wales
Royal College of Physicians of London	Member, Fellowship	M.R.C.P.Lond.; F.R.C.P.Lond.
Royal College of Surgeons of England	Fellowship	F.R.C.S.Eng.
Royal College of Physicians of Edinburgh	Membership, Fellowship	M.R.C.P.Edin.; F.R.C.P.Edin.
Royal College of Surgeons of Edinburgh	Fellowship	F.R.C.S.Edin.
Royal College of Physicians and Surgeons of Glasgow	Membership, Fellowship	M.R.C.P.S., M.R.C.P. Glasg.; F.R.C.P.Glasg.; F.R.C.P.S.Glasg.
Royal College of Physicians of Ireland	Membership, Fellowship	M.R.C.P.I.; F.R.C.P.I.
Royal College of Surgeons in Ireland	Fellowship	F.R.C.S.I.

OTHER POSTGRADUATE QUALIFICATIONS

- (i) AWARDS OF THE COLLEGE OF PATHOLOGISTS AND THE ROYAL COLLEGE OF OBSTETRICIANS AND GYNAECOLOGISTS

The College of Pathologists (Chandos House, 2, Queen Anne Street, London, W.1. Registrar: Professor T. Crawford) awards the following qualifications.

Pathologists are professionally engaged in one or more of the disciplines of Laboratory Medicine, including Morbid Anatomy and Histopathology, Medical Microbiology, Chemical Pathology and Haematology.

Fellowship of the College of Pathologists (F.C.Path.).
Fellows are elected from among Members.

Membership of the College of Pathologists (M.C.Path.).

Candidates for admission to Membership of the College must be medical practitioners registered or provisionally registered in the United Kingdom or Ireland or be medical practitioners with comparable qualifications.

The examination for admission is in two parts, Primary and Final. **The Primary Examination** consists of a compulsory paper on the general principles of pathology, a paper containing questions on two of the four major disciplines of Pathology and a practical examination for candidates who have passed the two written papers. Candidates must have had two years' approved training in Pathology.

In certain circumstances candidates may be exempted from all or part of the Primary Examination.

The Final Examination consists of two written papers in one of the four major disciplines of Pathology, followed by a practical examination for successful candidates. Candidates must have had five years' approved experience in Pathology.

College Diploma in Clinical Pathology. The Diploma is awarded to candidates who passed the Primary Examination for Membership in all four disciplines taken in pairs at two separate examinations. Candidates who successfully complete the Diploma and satisfy the regulations for admission to the Final Examination may proceed to it if they wish; those who have already passed the Primary Examination may complete the examination for the Diploma by taking the examination in the two subjects which were not taken in the practical tests in the former examination.

Candidates for the Diploma must have completed two years in full-time appointments in Pathology before taking the first examination; candidates from overseas are required to spend one year in full-time appointments in the United Kingdom before taking the second examination.

The Royal College of Obstetricians and Gynaecologists (27, Sussex Place, Regent's Park, London, N.W.1) awards the following qualifications:

Fellow of the Royal College of Obstetricians and Gynaecologists (F.R.C.O.G.). Fellows are elected from among Members of the College, having been judged by the Council of the College to have advanced the science and/or practice of Obstetrics and Gynaecology or to have attained such a position in the medical profession or in other fields as to merit promotion.

Member of the Royal College of Obstetricians and Gynaecologists (M.R.C.O.G.). Members must have been registered

medical practitioners for at least three years, have undertaken the minimum period of training required, submit a series of case records and commentaries and pass the Membership examination.

Requirements for Membership. There are three main requirements for admission to Membership, training, submission of case records and commentaries and an examination.

Training. Candidates must complete the following periods of training:

- (i) **General.** 12 months in resident hospital posts recognised for pre-registration purposes by licensing bodies in the United Kingdom, Ireland or South Africa, or 12 months' rotating internship similarly recognised in those Commonwealth countries with a Regional Council of the College.
- (ii) **Surgery.** 6 months in a general surgical post recognised for the purpose of training for their Fellowship by any one of the Royal Colleges of Surgeons in the United Kingdom, Ireland, South Africa or those Commonwealth countries with a Regional Council of the College.
- (iii) **Obstetrics.** 12 months' appointment or two 6 months' appointments to a fully resident post in a maternity hospital or in a maternity department of a general hospital.
- (iv) **Gynaecology.** 12 months' appointment or two 6 months' appointments to a post in a gynaecological hospital or in the gynaecological department of a general hospital.

The posts mentioned in (iii) and (iv) above must be recognised for the purposes of the Membership examination.

Case Records and Commentaries. During their training candidates must prepare:

- (i) the records of 15 selected obstetric and 15 selected gynaecological cases personally treated by them in their approved appointments and vouched for by the consultant under whose supervision the patients were treated; and
- (ii) one obstetrical and one gynaecological commentary (each of no more than 2,000 words), including references to the literature on the subject.

The Membership Examination consists of three written papers on Anatomy, Physiology, Embryology, Endocrinology, Biochemistry, Bacteriology and Pathology, with especial reference to their application to Obstetrics and Gynaecology; Obstetrics and such aspects of Medicine and Surgery as are relevant; Gynaecology, and such aspects of Medicine and Surgery as are relevant. There is also a clinical examination and an oral examination.

Diploma in Obstetrics (D.Obst.R.C.O.G.). The College awards a Diploma in Obstetrics to registered medical practitioners who have had special postgraduate training and passed the required examinations.

British candidates must be qualified doctors. Overseas candidates must be eligible for entry to the British Register of Medical Practitioners by virtue of their qualifications.

Candidates must have complied with the following requirements:

- (i) **General Training.** 12 months' residence after qualification in appointments acceptable for pre-registration purposes to the General Medical Council or in corresponding appointments in Commonwealth countries or in any approved resident appointment.
- (ii) **Obstetrics.** 6 consecutive months' residence in an appointment recognised by the College for the examination or in an obstetric appointment recognised for the Membership examination or in a combined appointment recognised for Membership in which obstetrics and gynaecology are concurrent.

The Examination covers the whole field of Obstetrics, including postnatal care of mother and child and the disabilities which may arise from childbirth. It consists of a written paper, a clinical examination and an oral and practical examination.

(ii) POSTGRADUATE DIPLOMAS

Universities, the Royal Colleges and other bodies confer diplomas in specialist areas of Medicine, usually after full-time or part-time courses of instruction. In most cases candidates for the award of diplomas must either be registered medical practitioners or have a medical qualification which entitles them to registration on the British Medical Register. In all cases candidates are required to pass an examination, which may consist of Primary and Final examinations or Parts I and II examinations.

Diplomas are awarded in the following areas of study:

Anaesthetics (*see* also Royal College of Surgeons of England (F.F.A.R.C.S.Eng.).

Diploma in Anaesthetics (D.A.). Awarded by the English Conjoint Board. Candidates must have a registrable qualification or be graduates of a recognised university. Courses of instruction are offered by the Universities of Liverpool (1 or 2 years full-time) and London (1 year full-time); the London course is organised by the Postgraduate Medical School of London.

Bacteriology

Diploma in Bacteriology (Dip.Bact.). Awarded by the Universities of London (Academic Postgraduate Diploma) and Manchester, which also offer one-year full-time courses of instruction. The London course is offered at the London School of Hygiene and Tropical Medicine and may also be organised at other hospitals.

Industrial Health

Diploma in Industrial Health (D.I.H.). The Society of Apothecaries of London instituted the Diploma in Industrial Health in 1946. The examination is open to registered medical practitioners who have been engaged in the practice of Industrial Medicine either in a civil capacity or in the armed services. Candidates must have been in the full-time practice of Industrial Medicine or in medical research in industry for not less than two years or in the part-time practice of Industrial Medicine or medical research in industry for not less than four years.

The syllabus of the examination, which consists of three written papers and of clinical and oral examinations, covers the history of Industrial Medicine, Industrial Toxicology, industrial environment, Industrial Physiology and Psychology, the practice of Industrial Medicine, and the structure and working of industry.

Recognised one-year full-time and two-year part-time courses in the subjects of the examination are offered by the following establishments:

University of Edinburgh; University of London (London School of Hygiene and Tropical Medicine); University of Manchester; University of St. Andrews; The Royal Infirmary, Glasgow; The Royal Institute of Public Health and Hygiene.

Diploma in Industrial Health (D.I.H.). Awarded by the Royal College of Physicians and Surgeons of Glasgow, the English Conjoint Board and the University of St. Andrews. Candidates must have registrable qualifications or other qualifications recognised by these three bodies. The English Conjoint Board requires candidates for its diploma to take a one-year full-time (or the equivalent) course; the Royal College of Physicians of Glasgow requires one term full-time (or the equivalent) for Part I and five months full-time (or the equivalent) for Part II; the University of St. Andrews offers a one-year full-time course.

Certificate in Industrial Health (C.I.H.). Awarded by the University of St. Andrews after a one-term course. Candidates

must be registered medical practitioners or have qualifications recognised by the University.

Diploma in Occupational Hygiene (D.O.Hyg.). Awarded by the University of London (Academic Postgraduate Diploma), which offers a one-year full-time course at the Royal Free Hospital Medical School, St. Thomas's Hospital Medical School and the London School of Hygiene and Tropical Medicine. Candidates must have degrees in Physics, Chemistry, Engineering, or Medicine and have suitable training.

Medical Chemistry

Academic Postgraduate Diploma in General Biochemistry.

Awarded by the University of London, which offers a one-year full-time course at the Medical Schools of Guy's Hospital, the Middlesex Hospital, the London Hospital, the Royal Free Hospital, St. Bartholomew's Hospital, St. Mary's Hospital, St. Thomas's Hospital and University College Hospital. Candidates must have medical or scientific qualifications recognised by the University.

Medical Engineering

Diploma of Membership of Imperial College in Public Health Engineering (D.I.C.). Awarded by the Imperial College of Science and Technology, London University, which offers a one-year full-time course. Candidates must be graduates in Medicine or the biological sciences.

Diploma in Medical Jurisprudence (D.M.J.(Clin.) and D.M.J.(Path.)). The examination is open to registered medical practitioners who have had experience of medico-legal practice and is divided into two parts. Part I, the Primary Examination, covers basic matters related to all branches of medico-legal practice; Part II, the Final Examination, may be taken in either or both of two branches, clinical (which is registered D.M.J.(Clin.)) or Pathology (to be registered D.M.J.(Path.)).

Candidates for Part II clinical must have spent three years or more in one of the following posts:

Prison medical officer; medical officer holding an advisory appointment to a court; appointed police surgeon; medical referee of an insurance company; appointed factory doctor; medical officer holding an appointment in a defence society; Coroner and Deputy Coroner; teachers of forensic medicine; psychiatrists specialising in delinquency and similar areas.

Candidates for Part II pathology must have completed three years' training in a recognised department of Pathology or Forensic Medicine and have performed post mortem examinations.

Medical Physics

Diploma in Biophysics. Awarded by the University of Edinburgh, which offers a one-year full-time course. Candidates must be graduates in Science or have medical qualifications recognised by the University.

Diploma in the Principles and Practice of Radiation Protection. Awarded by Battersea College of Technology, which offers a one-year full-time or a two-year part-time course. Candidates must have a degree in Science, Medicine or Engineering or another qualification recognised by the College.

Medical Services Administration

Diploma of Medical Services Administration (D.M.S.A.). Awarded by the University of Edinburgh, which offers a one-year full-time course. Candidates must be graduates of Edinburgh University or hold a qualification (which need not be in medicine) approved by the University.

Microbiology

Diploma in Microbiology (Dip.Microbiol.). Awarded by the University of Sheffield after a one-year full-time course for graduates.

Nutrition

Diploma in Nutrition (D.N.). Awarded by the University of London (Academic Postgraduate Diploma), which offers a one-year full-time course at Queen Elizabeth College and the London School of Hygiene and Tropical Medicine. Candidates must be medical graduates or have another approved qualification.

Ophthalmology (*see* also the Royal Colleges of Surgeons of England, Edinburgh and Glasgow)

Diploma in Ophthalmology (D.O.). Awarded by the English Conjoint Board. Candidates must have registrable qualifications or be graduates of a recognised university; they must have been qualified for two years and have had approved training and experience.

Otology (*see* also the Royal Colleges of Surgeons of England, Edinburgh and Glasgow)

Diploma in Laryngology and Otology (D.L.O.). Awarded by the English Conjoint Board. Candidates must be registered medical practitioners or be graduates of universities recognised by the Board. Courses are offered at the Institute of Laryngology and Otology (British Postgraduate Medical Federation, London University).

Diploma in Audiology. Awarded by the University of Manchester, which offers a one-year full-time course at the Department of Audiology and the Education of the Deaf. Candidates must be medical practitioners with suitable experience or other persons whose qualifications are approved by the University.

Paediatrics

Diploma in Child Health (D.C.H.). Awarded by the English Conjoint Board. Candidates must have registrable qualifications or be graduates of recognised universities. The University of London offers a one-year full-time course, organised by the Institute of Child Health, at various Schools and Colleges; full- and part-time courses are also offered by the Universities of Bristol, Birmingham, Liverpool, Sheffield, St. Andrews and Wales.

Parasitology

Diploma in Applied Parasitology and Entomology (D.A.P. & E.). Awarded by the University of London (Academic Postgraduate Diploma), which offers a one-year full-time course at the London School of Hygiene and Tropical Medicine. Candidates must be graduates in Medicine, Veterinary Medicine, Veterinary Science or Science, with training fitting them for the course.

Pathology (*see* also the College of Pathologists, M.C.Path.)

Diploma in Clinical Pathology (D.C.P.). Awarded by the University of London (as an Academic Postgraduate Diploma, internal, or as an External Postgraduate Diploma), which offers a one-year course for full-time students at the Postgraduate Medical School of London or in the pathology departments of other University Schools or Colleges. Candidates must be registered medical practitioners, with approved training and experience, or graduates in medicine.

Diploma in Pathology (D.Path.). Awarded by the English Conjoint Board. Candidates must have recognised medical qualifications of four years' standing.

Physical Medicine

Diploma in Physical Medicine (D.Phys.Med.). Awarded by the English Conjoint Board. Candidates must be graduates of recognised universities or have registrable qualifications of at least one year's standing. A six-month part-time course for Part I is offered by Guy's Hospital Medical School, London.

Psychiatry

Diploma in Psychological Medicine (D.P.M.). Awarded by the English Conjoint Board. Candidates must be graduates of

recognised universities or have registrable qualifications; candidates for Part I must have been qualified for at least one year and candidates for Part II must have had at least two years' approved psychiatric experience.

Diploma in Psychological Medicine (D.P.M.). Awarded by the Scottish Conjoint Board. Candidates must have registrable qualifications or other qualifications recognised by the Board. Candidates for Part I must have been qualified for at least one year and candidates for Part II must have had two years' recognised experience in a psychiatric hospital.

Diploma in Psychological Medicine (D.P.M.). Diplomas are also awarded by the Universities of Edinburgh, Leeds, London, Manchester, and Newcastle. The qualifications required of candidates are similar to those required by the two conjoint boards.

Public Health

Diploma in Public Health (D.P.H.). Medical Officers of Health must have a Diploma in Public Health, which is conferred by the university licensing bodies listed below, by the Conjoint Board of the Royal College of Physicians of London and the Royal College of Surgeons of England. The syllabus for the Diploma includes subjects relating to public health law and administration, occupational health, preventive and social medicine, health education, housing and sanitation. Courses of instruction last one year full-time or 18 months part-time or a combination of a period of full-time and part-time instruction.

Courses are available at the following establishments:

University of Aberdeen; Queen's University, Belfast; University of Bristol; University of Edinburgh; University of Glasgow; University of Leeds; University of Liverpool; University of London (London School of Hygiene and Tropical Medicine); University of Manchester; University of Newcastle; University of St. Andrews; University of Wales; Royal Institute of Public Health and Hygiene.

Radiodiagnosis (*see* also Royal College of Surgeons of England, F.F.R.R.C.S. Eng.)

Diploma in Radiology (Diagnosis) (D.M.R.(D.)). Awarded by the English Conjoint Board. Candidates must have qualifications recognised by the Board and be registered either in the United Kingdom or in the country where their qualifications were obtained. Candidates must have been qualified for at least one year, have had a year's resident appointment in a recognised hospital (other than in radiology) and have had two years' part-time and full-time instruction. Courses are offered at the following:

University of Birmingham; University of Bristol; University of Glasgow; University of London; University of Manchester; University of Sheffield.

Diploma in Radiology (Diagnosis) (D.M.R.D.). Awarded by the University of Edinburgh, which offers a two-year full-time course of instruction. Candidates must have medical qualifications registrable in the United Kingdom or recognised by the University; candidates must have been qualified for at least two years.

Diploma in Radiology (Diagnosis) (D.M.R.(D.)). Awarded by the University of Liverpool, which offers a two-year full-time course of instruction. Candidates must be graduates in Medicine or in subjects related to the course.

Radiotherapy (*see* also Royal College of Surgeons of England, F.F.R.R.C.S. Eng.)

Diploma in Radiology (Therapy) (D.M.R.(T.)). Awarded by the English Conjoint Board. Candidates must have qualifications recognised by the Board and be registered either in the United Kingdom or in the country in which their qualifications were obtained. Other requirements are as for the Diploma in Radiology (Diagnosis). Courses of instruction are offered by the following:

University of Birmingham; University of Bristol; University of Glasgow; University of London; University of Manchester; University of Sheffield.

Diploma in Radiology (Therapy) (D.M.R.T.). Awarded by the University of Edinburgh, which offers a two-year full-time course of instruction. The requirements are as for the Diploma in Radiology (Diagnosis).

Diploma in Radiology (Therapy) (D.M.R.(T.)). Awarded by the University of Liverpool, which offers a two-year course of instruction. Requirements are as for the Diploma in Radiology (Diagnosis).

Tropical Medicine and Hygiene

Diploma in Tropical Medicine and Hygiene (D.T.M. & H. Eng.). Awarded by the English Conjoint Board. Candidates must be graduates of recognised universities or have registrable qualifications. A five-month full-time course of instruction is offered at the London School of Hygiene and Tropical Medicine, University of London.

Diploma in Tropical Medicine and Hygiene (D.T.M. & H. Ed.). Awarded by the University of Edinburgh, which offers a two-term course of instruction. Candidates must have registrable qualifications or qualifications recognised by the University.

Diploma in Tropical Medicine and Hygiene (D.T.M. &

H. Liv.). Awarded by the University of Liverpool, which offers a three-month full-time course. Candidates must have qualifications recognised by the University.

Diploma in Clinical Medicine of the Tropics (D.C.M.T. Lond.). Awarded by the University of London (Academic Postgraduate Diploma), which offers a one-year full-time course of instruction at the London School of Hygiene and Tropical Medicine. Candidates must have registrable or other approved medical qualifications, together with suitable experience.

Diploma in Tropical Public Health (D.T.P.H. Lond.). Awarded by the University of London (Academic Postgraduate Diploma), which offers a one-year full-time course of instruction at the London School of Hygiene and Tropical Medicine. Candidates must have registrable or other approved medical qualifications, together with suitable experience.

Tuberculosis

Diploma in Tuberculosis and Chest Diseases (D.T.C.D.). Awarded by the University of Wales, which offers a six-month full-time course at the Welsh National School of Medicine. Candidates must have been qualified for two years and their qualifications must be registrable or recognised by the University. Candidates must have spent a year in approved study of chest diseases or have had a year's resident chest disease appointment in a recognised hospital.

SUMMARY OF POSTGRADUATE QUALIFICATIONS, OTHER THAN HIGHER DEGREES, LISTED BY SUBJECT AREA

<u>Awarded by</u>	<u>Title</u>	<u>Designatory Letters</u>
Anaesthetics		
English Conjoint Board Faculty of Anaesthetists	Diploma in Anaesthetics Fellowship	D.A. F.F.A.R.C.S.Eng.
Bacteriology		
University of London	Diploma in Bacteriology	Dip.Bact.
University of Manchester	ditto	Dip.Bact.
Industrial Health		
English Conjoint Board	Diploma in Industrial Health	D.I.H.
Royal College of Physicians and Surgeons of Glasgow	ditto	D.I.H.
Society of Apothecaries of London	ditto	D.I.H.
University of St. Andrews	ditto	D.I.H.
University of St. Andrews	Certificate in Industrial Health	C.I.H.
University of London	Diploma in Occupational Hygiene	D.O.Hyg.

Awarded by	Title	Designatory Letters
Laryngology and Otology		
English Conjoint Board	Diploma in Laryngology and Otology	D.L.O.
Royal College of Surgeons of England	Fellowship	F.R.C.S.Eng.
Royal College of Surgeons of Edinburgh	Fellowship	F.R.C.S.Edin.
Royal College of Physicians and Surgeons of Glasgow	Fellowship	F.R.C.S.Glasg.
University of Manchester	Diploma in Audiology	
Medical Chemistry		
University of London	Diploma in General Biochemistry	
Medical Engineering		
Imperial College, London	Diploma of Imperial College in Public Health Engineering	D.I.C.
Medical Jurisprudence		
Society of Apothecaries of London	Diploma in Medical Jurisprudence	D.M.J.(Clin.) and D.M.J.(Path.)
Medical Physics		
University of Edinburgh	Diploma in Biophysics	
Battersea College of Technology	Diploma in the Principles and Practice of Radiation Protection	
Medical Services Administration		
University of Edinburgh	Diploma of Medical Services Administration	D.M.S.A.
Medicine		
Royal College of Physicians of London	Membership	M.R.C.P.Lond.
Royal College of Physicians of Edinburgh	Membership	M.R.C.P.Edin.
Royal College of Physicians and Surgeons of Glasgow	Membership	M.R.C.P.Glasg.
Microbiology		
University of Sheffield	Diploma in Microbiology	Dip.Microbiol.
Nutrition		
University of London	Diploma in Nutrition	D.N.
Obstetrics and Gynaecology		
Royal College of Obstetricians and Gynaecologists	Diploma in Obstetrics	D.Obst.R.C.O.G.
ditto	Membership	M.R.C.O.G.
Royal College of Surgeons of Edinburgh	Fellowship	F.R.C.S.Edin.
Royal College of Physicians and Surgeons of Glasgow	Fellowship	F.R.C.S.Glasg.

<u>Awarded by</u>	<u>Title</u>	<u>Designatory Letters</u>
Ophthalmology		
English Conjoint Board	Diploma in Ophthalmology	D.O.
Royal College of Surgeons of England	Fellowship	F.R.C.S.Eng.
Royal College of Surgeons of Edinburgh	Fellowship	F.R.C.S.Edin.
Royal College of Physicians and Surgeons of Glasgow	Fellowship	F.R.C.S.Glasg.
Paediatrics		
English Conjoint Board	Diploma in Child Health	D.C.H.
Royal College of Physicians and Surgeons of Glasgow	Diploma in Child Health	D.C.H.
Pathology		
English Conjoint Board	Diploma in Clinical Pathology	D.C.P.
College of Pathologists	Membership	M.C.Path.
Physical Medicine		
English Conjoint Board	Diploma in Physical Medicine	D.Phys.Med.
Psychiatry		
English Conjoint Board	Diploma in Psychological Medicine	D.P.M.
Scottish Conjoint Board	ditto	D.P.M.
University of Edinburgh	ditto	D.P.M.
University of Leeds	ditto	D.P.M.
University of London	ditto	D.P.M.
University of Manchester	ditto	D.P.M.
University of Newcastle	ditto	D.P.M.
Public Health		
English Conjoint Board	Diploma in Public Health	D.P.H.
Scottish Conjoint Board	ditto	D.P.H.
University of Aberdeen	ditto	D.P.H.
Queen's University, Belfast	ditto	D.P.H.
University of Bristol	ditto	D.P.H.
University of Edinburgh	ditto	D.P.H.
University of Glasgow	ditto	D.P.H.
University of Leeds	ditto	D.P.H.
University of Liverpool	ditto	D.P.H.
University of London	ditto	D.P.H.
University of Manchester	ditto	D.P.H.
University of Newcastle	ditto	D.P.H.
University of St. Andrews	ditto	D.P.H.
University of Wales	ditto	D.P.H.
Radiodiagnosis		
English Conjoint Board	Diploma in Medical Radiology (Diagnosis)	D.M.R.D.
Faculty of Radiologists	Fellowship	F.F.R.R.C.S.Eng.
University of Edinburgh	Diploma in Medical Radiology (Diagnosis)	D.M.R.D.
University of Liverpool	ditto	D.M.R.D.

Awarded by	Title	Designatory Letters
Radiotherapy		
English Conjoint Board	Diploma in Medical Radiology (Therapy)	D.M.R.T.
Faculty of Radiologists	Fellowship	F.F.R.R.C.S.Eng.
University of Edinburgh	Diploma in Medical Radiology (Therapy)	D.M.R.T.
University of Liverpool	ditto	D.M.R.T.
Surgery		
Royal College of Surgeons of England	Fellowship	F.R.C.S.Eng.
Royal College of Surgeons of Edinburgh	Fellowship	F.R.C.S.Edin.
Royal College of Physicians and Surgeons of Glasgow	Fellowship	F.R.C.P.S.Glasg.
Tropical Medicine and Hygiene		
English Conjoint Board	Diploma in Tropical Medicine and Hygiene	D.T.M. & H.Eng.
University of Edinburgh	ditto	D.T.M. & H.Ed.
University of Liverpool	ditto	D.T.M. & H.Liv.
University of London	Diploma in Clinical Medicine of the Tropics	D.C.M.T.Lond.
University of London	Diploma in Tropical Public Health	D.T.P.H.Lond.
Tuberculosis		
University of Wales	Diploma in Tuberculosis and Chest Diseases	D.T.C.D.

METALLURGY

The Institution of Metallurgists 4, Grosvenor Gardens, London, S.W.1

Fellows (F.I.M.) must be at least 30 years of age and of established reputation as metallurgists—only the above average metallurgist will have the necessary reputation by the time he reaches the minimum age.

Candidates must pass the Fellowship examination or gain exemption from it, and have eight years' responsible experience.

Associates (A.I.M.) must be at least 25 years of age and have passed Part IV of the Institution's examinations, or gained exemption from it. At least three years' satisfactory experience is required after obtaining the academic qualification.

Licentiates (L.I.M.) must be at least 21 years of age and have passed Part III of the Institution's examination or gained exemption from it.

Graduates (Grad.I.M.) must be at least 20 years of age and have either passed the Associateship examination or gained exemption from it, by holding a degree in metallurgy recognised for this purpose by the Institution.

Enrolled Students must be at least 18 years of age and have been admitted to a university or approved college course, or hold an O.N.C. or its equivalent, in metallurgy. They must be following a course of study leading to a qualification higher than the O.N.C. in level.

THE INSTITUTION'S EXAMINATIONS

The Associateship Examination is held in four parts.

Exemption is granted to (i) holders of honours degrees or diplomas who have subsequently done work of sufficient merit, of three years' experience; (ii) holders of honours degrees or equivalent in Metallurgy with three years' satisfactory experience in Metallurgy; (iii) holders of formal qualifications in subjects other than Metallurgy of a level at least equivalent to Associateship, combined with five years' approved responsible experience; (iv) bearers of practical responsibility of sufficient technological standard, having made contributions to Metallurgy that have given them sufficient standing as fully qualified metallurgists with four years' experience for candidates already Licentiates and eight years for others.

Exemption from Part III (i.e. Licentiateship qualification) is gained by holders of either an approved degree in metallurgy (or certain approved diplomas) and two years' experience in metallurgy, or other approved scientific qualifications (e.g. a degree in chemistry, physics or engineering) and three years' experience.

Until 1966 only, Full Technological Certificates of the C.G.L.I. together with three years' experience will, under certain conditions, gain exemption, as will an H.N.C. in Metallurgy, on a subject-for-subject basis (in which distinction standard is attained) together with three years' experience.

Courses covering the requirements of the Associate Membership examinations are conducted at:

Battersea College of Technology; Birmingham College of Advanced Technology; Brunel College; Constantine College of Technology, Middlesbrough; John Dalton College, Manchester; Newport and Monmouthshire

College of Technology; Sir John Cass College; Wednesbury County Technical College; Coatbridge Technical College.

Exemption from the Fellowship Examination may be gained by Associates who produce evidence that they have the required level of experience and reputation as metallurgists or made significant personal contributions to metallurgical science or practice. Non-Associates must have established reputations and one of the exempting qualifications for Associateship, and made significant and widely acknowledged personal contributions to metallurgy by doing work of special merit during not less than eight years' responsible experience. Candidates having an established reputation but not the qualifications should have 12 years' responsible experience during which they should have made personal contributions by doing work of special merit.

The Institute of Metals

17, Belgrave Square, London, S.W.1

The Institute is not a qualifying body and all persons engaged in manufacture, use or working of non-ferrous metals and alloys or having scientific, technical or literary attainments in non-ferrous Metallurgy are eligible for membership.

Ordinary Members must be not less than 21 years of age and eligible as described above.

Junior Members must be not less than 21 years nor more than 28 years of age and are eligible as described above. The grade is also open to pupils or assistants of persons qualified for Ordinary Membership.

Student Members are admitted between 17 and 25 years of age and must either be students of Metallurgy or allied sciences or pupils or assistants of persons qualified for Ordinary Membership.

The Iron and Steel Institute

4, Grosvenor Gardens, London, S.W.1

Membership of the Institute is suitable for those who are interested in the scientific or technological development of the iron and steel industry and associated technologies. Admission is by election on payment of the required subscription — evidence of qualifications is *not* required.

UNIVERSITY DEGREES AND DIPLOMAS

(i) FIRST DEGREES

Honours degree courses are offered at the universities listed below. The courses are normally 3 years in length, but 4-year courses are offered at some universities if full course requirements (in terms of 'A' levels) are not met by the candidate. At the University of Wales suitable O.N.C., O.N.D., H.N.C. and H.N.D. qualifications are accepted. For 3-year courses, normal entry requirements are 3 'A' level passes in Science and Mathematics, including Physics and Chemistry. For details of higher and other degrees in Metallurgy, refer to the entries for individual universities in Part 4.

Birmingham. B.Sc.: 3 years. **Physical Metallurgy and Industrial Metallurgy.**

Cambridge. B.A.: 3 years.

Leeds. B.Sc.: 3 or 4 years.

Liverpool. B.Sc. or B.Eng.: 3 years.

London. B.Sc.(Eng.): 3 years. Imperial College, Sir John Cass College.

Manchester. B.Sc. Faculties of Science or Technology: 3 years.

Newcastle. B.Sc.: 3 or 4 years.

Nottingham. B.Sc.: 3 or 4 years. Also Joint Honours **Mining and Metallurgy.**

Oxford. B.A.: 3 years.

Sheffield. B.Met.: 3 or 4 years; **B.Sc.Tech. in Materials Technology:** 3 years.

Sussex. B.Sc. Materials Science: 3 years.

Wales (Cardiff, Swansea). B.Sc.: 3 or 4 years.

The Paisley College of Technology offers a course leading to the external London degree.

(ii) UNIVERSITY DIPLOMAS

Courses are offered at the following universities:

Birmingham (Industrial Metallurgy): 1 year postgraduate.

Cambridge: 1 year postgraduate.

Leeds: 1 year postgraduate.

London (Imperial College). (D.I.C.): 2 years.

Sheffield: 1 year postgraduate.

Wales (Cardiff): 3 years.

(iii) DIP.TECH., C.N.A.A. DEGREES AND DEGREES OF FORMER C.A.T.'S
Dip.Tech. courses were offered at the former C.A.T.'s listed below.

These courses now lead to degrees of the new universities. (The courses are 4 years sandwich or 3 years full-time and the course requirement 2 'A' level passes (normally in Physics and Chemistry), although 3 'A' levels are required at Salford.)

Battersea C.T. B.Sc. (in Metallurgy or Materials Technology): 3 or 4 years.

Birmingham C.A.T. B.Sc.: 4 years.

Bradford I.T. B.Tech. (in Materials Science and Technology): 4 years.

Bristol C.S.T. B.Sc. (in Engineering Metallurgy): 4 years.

Brunel College. B.Tech.: 4 years.

Salford Royal C.A.T. B.Sc. (in Engineering Metallurgy): 4 years.

Strathclyde. B.Sc.: 4 years. 'A' level passes in Pure and Applied Mathematics required.

The Dip. course at the Sheffield College of Technology will now lead to the **B.Sc. degree of the C.N.A.A.**

NATIONAL CERTIFICATES AND DIPLOMAS

National Certificate and Diploma courses are conducted at many technical colleges in different parts of the country.

Ordinary National Certificate (O.N.C.) courses are three years (part-time) for students who have completed full-time education or a preparatory part-time course by the age of 16 years. For students with 'O' levels in Chemistry, Physics, Mathematics and English the course is two years in duration.

Higher National Certificate (H.N.C.) courses are of two years' duration (part-time) and entry requirements are O.N.C. or 'A' level passes in Mathematics, Physics, and Chemistry.

Higher National Diploma (H.N.D.) courses are three years sandwich and entry requirement is O.N.C. standard or an 'A' level pass in Mathematics, Physics and Chemistry, the other subjects being studied to 'A' level standard.

H.N.D. courses in Metallurgy are offered at:

Flintshire Technical College; Lanchester College of Technology; Manchester College of Science and Technology; Constantine Technical College; Newport and Monmouth College of Technology; Swansea College of Technology; Wednesbury Technical College.

COLLEGE DIPLOMAS

College Diploma courses are offered in metallurgy at Sir John Cass College (2 years full-time), Sheffield College of Commerce and

Technology (1 year full-time), Wednesbury County Technical College (5 years sandwich), Lanchester College of Technology, Coventry (1 year full-time); Bradford I.T. (Postgraduate Diploma in Metals Technology, 1 year full-time).

CITY AND GUILDS OF LONDON INSTITUTE EXAMINATION

C.G.L.I. examinations are conducted for:

Metallurgical Technician's Certificate (Subject No. 154)

Metallurgical Technician's Advanced Certificate (Subject No. 155).

CERTIFICATES OF THE REGIONAL EXAMINING UNIONS

The following bodies offer courses leading to O.N.C. in Metallurgy:

Union of Lancashire and Cheshire Institutes; The Northern Counties Technical Examinations Council; Union of Educational Institutes; East Midland Educational Union; Welsh Joint Education Committee.

MORAL WELFARE WORK

Moral Welfare workers are concerned with the problems of the unmarried mother and her child. Most of the work is carried out under the auspices of the churches and the Salvation Army.

Specialised training for this work usually begins at about the age of 23 or 24 years. A residential course is available at the Josephine Butler Memorial House (34, Alexandra Drive, Liverpool, 17). The course varies with the candidate's qualifications. The two main courses are:

Grade A course. Three-year course in conjunction with the **Certificate in Social Science course of Liverpool University.** The course may be reduced for holders of degrees in relevant subjects or diplomas or certificates in Social Science.

Grade B course. A less advanced two-year course covering the same syllabus but not including the Certificate in Social Science.

Older experienced candidates may take a special four-term course. These courses are open to women of all denominations.

MUNICIPAL ADMINISTRATION

Diploma in Municipal Administration (D.M.A.). This Diploma is awarded by the Local Government Examinations Board to candidates who are successful in the **Final Administrative Examination**. To enter for this examination candidates must (i) be at least 21 years old and have had at least three years' experience with a public authority and (ii) either have passed the **Intermediate Administrative Examination** (open to public authority officers of at least 19 years and consisting of five papers — two on Local and Central Government; one essay and précis paper; a paper on Economics or Mathematics or Statistics and one optional paper), or hold one of the following qualifications:

A university Diploma in Public Administration.

A degree covering Social Studies (*see* Social Science, page 982.)

The final examination certificate of the Chartered Institute of Secretaries; or the Institute of Municipal Treasurers and Accountants.

The Final Administrative Examination is divided into two parts, which may be taken together or separately in either order.

Part I is three compulsory papers — principles and problems of Public Administration, General and Local Government; and the Social Services. Part II consists of two papers, one chosen from group A, one from group B. Group A includes Social and Political Theory; Political Institutions; Social Statistics; Economics of Public Finance; Administrative Law; Nationalised Industries Administration. Group B covers Local Government Law; Local Government Finance; Education; Public Health; Welfare Services; and the administration of any sphere of local authority activity not covered in group B's list. This choice of another unlisted topic must be approved by the Board.

Diploma in Government Administration (D.G.A.) of the Local Government Examinations Board. This Diploma is parallel to the D.M.A. and designed to be of special interest to civil servants. It is granted to candidates successful in the **Final Administrative Examination** (*see above*, D.M.A.). Candidates for the D.G.A. take the three papers of Part I: Principles and Problems of Public Administration—General and Central Government; and the Social Services or Nationalised Industries Administration. The two subjects of Part II must be chosen from the following: Social and Political Theory; Political Institutions; Social Statistics; Economics of Public Finance; Administrative Law; Nationalised Industries

Administration or the Social Services, whichever has not been taken in Part I.

MUNICIPAL BUILDING MANAGEMENT

The Institute of Municipal Building Management

Hon. General Secretary,

9, Chapter Close, Hillingdon, Uxbridge, Middlesex

(From 31st December, 1968, membership will be restricted to (a) those who have qualified by examination for entry to Licentiate-ship, Associateship or Membership, and (b) those who are at least 45 years old, work in a local authority or similar building organisation and prepare a thesis and pass an oral examination.)

Fellows (F.I.Mun.B.M.) are elected from corporate members in recognition of outstanding service to the profession or to the Institute.

Members (M.I.Mun.B.M.) may be either managers or others directly responsible for a building department of a local authority or public utility undertaking; or people employed in technical work in such a department who hold the H.N.C. in Building or an approved equivalent; these candidates must also submit a thesis on Management and take examinations in subjects which the Council may decide.

Associates (A.I.Mun.B.M.) are either those working in an approved senior capacity in a building organisation who are not eligible for other classes of membership; or those working in such an organisation who hold the O.N.C. in Building or an approved equivalent and have passed the prescribed examinations of the Institute.

Licentiates (L.I.Mun.B.M.) are either people working in an approved capacity in building management, or people in such work who have successfully completed the first two years of an O.N.C. in Building, or an approved equivalent course, and have also passed the Institute's Licentiate examination.

Students are those working in approved positions in building management who are at least 16 years old and either have passed G.C.E. 'O' level in four subjects including English Language and Mathematics or have been in full-time education until the age of 16.

Honorary Members of the Institute (or Honorary Associates) are elected in recognition of outstanding services to the profession or to the Institute.

The Institute also has **Retired Members**.

THE INSTITUTE'S EXAMINATIONS

Diplomas are awarded to candidates successful in each examination.

The Licentiate Examination is open to Registered Students and must be attempted within three years of registration. It consists of papers on Building Management (Part I) and Central and Local Government (Part I).

The Associateship Examination is open to Registered Students and must be attempted within five years of registration or within two years of passing the Licentiate Examination. It consists of papers on Building Management (Part II) and on either Central and Local Government (Part II) or Local Government Finance.

Membership Examination. This examination also is open to Registered Students. It must be attempted within seven years of registration or within two years of passing the Associateship Examination. Candidates are required to present an original thesis on the organisation of a local authority or public utility building department, to submit to an oral examination, and to take written examinations on the following subjects: Management Methods (2 papers); Local Government Administration; Report Writing; and one of the following: the Design and Operation of a costing system; Purchase of Plant and Materials; employer/employee relationship.

MUNICIPAL ENTERTAINMENT

Institute of Municipal Entertainment

White Rock Pavilion, Hastings, Sussex

The objects of the Institute include the further development of the service of municipal entertainment managers as a recognised profession.

Fellow (F.I.M.Ent.). Candidates for Fellowship must already be Associate Members of the Institute and be full-time entertainment officers directly responsible to local authorities for the performance of their duties.

Associate (A.I.M.Ent.). Candidates for Associateship must be not less than 21, be full-time officers in the service of a local auth-

ority and have been engaged for at least one year in its entertainment department or in the organisation of entertainment work. They must also have passed the Diploma Examination.

Member (M.I.M.Ent.). Candidates for Membership must be at least 40, have occupied a post of full-time principal entertainment officer of a local authority for not less than five years and be directly responsible to a local authority for the performance of their duties.

Honorary Fellow. The Institute may elect to Honorary Fellowship persons who have rendered special services to the Institute or in connection with municipal entertainment.

EXAMINATIONS

Candidates for the Diploma of the Institute may be examined by written papers or otherwise.

Civic Entertainments Officers' Association

Manor House, Church Road, Hayes, Middlesex

The objects of the Association include the promotion of the professional knowledge of officers engaged in Civic Entertainments and Recreation. Membership is open to any officer of a local authority who has been engaged for at least two years in the promotion or presentation of municipal entertainment. The Association does not conduct examinations for membership.

Fellows (F.C.E.O.A.) must already be Associate Members of the Association and the officers responsible for entertainment and recreation for their authorities.

Members (M.C.E.O.A.), Associates (A.C.E.O.A.) and **Honorary Life Members** are also elected.

MUSEUM WORK

The Museums Association

87, Charlotte Street, London, W.1

Honorary Fellow. There are 16 Honorary Fellows, nominated by the Council and elected by the Association.

Fellows (F.M.A.) are elected by the Council from among the Associates of at least five years' standing 'who have made outstanding contributions to the direction or literature of museums'.

Associates (A.M.A.) are holders of the Association's Diploma (*see below*).

Membership. Anyone may apply for membership. Those employed in Museum work are classed as **Ordinary Professional Members**; those without such experience as **Non-Professional Members**. People who have been accepted for registration as students working for the Diploma are classified as **Student Members**.

Institutional Members. Any Museum or art gallery may become an Institutional Member on payment of an annual subscription.

AWARDS OF THE ASSOCIATION

Museums Association Diploma. The Diploma qualifies holders for Associateship of the Association, and is the professional qualification for museum workers. Candidates for the Diploma must be either Ordinary Members or Student Members of the Association and have been working for at least six months full-time in a museum. They must be at least 18 years old. The minimum educational requirement for entry to the Diploma examinations is G.C.E. in English language and four other approved subjects; two of these subjects must be passed at 'A' level. These are the minimum requirements, but the Association urges all students who can do so to take a degree course before studying for the Diploma, since many museum posts now are open only to graduates.

Candidates must sit the examination within five years of registration and after they have taken part-time courses arranged by the Association. These are Administrative, Technical and Specialised Demonstration courses and candidates must attend at least one of each before sitting the Final. The examinations are taken in two parts.

The Intermediate Examinations consist of two papers in a specified subject (Art, Folklife, Geology, Military History, etc.) and an essay designed to test the candidate's academic ability.

Exemption may be granted to holders of a university degree or equivalent diploma which includes as a principal subject the special subject offered.

The Final Examination may be taken two years after the Intermediate has been passed. It consists of two papers on museum administration, one paper on general museum practice, two papers on the techniques and applications of the special subject, an essay paper, a practical examination on the special subject and a thesis, which must be submitted within a year of taking the written examinations. No exemptions are granted from the Final examination.

The Diploma may be awarded with Distinction to students who show outstanding merit in the Final.

OTHER QUALIFICATIONS OF THE MUSEUMS ASSOCIATION

(Not carrying admission to Associateship of the Association.)

Technical Certificate. This Certificate provides evidence that the holder has reached a good standard of technical and practical ability in museum work.

No course of training is available at the moment and candidates reach the necessary standard by experience. They must be at least 21 years old, have been employed in a museum for at least five years and have worked mainly on conservation, restoration and preparation for display in one of the following groups: (a) Natural History Material; (b) Archaeological Material; (c) Applied Art; (d) Fine Art (other than oil paintings); (e) Ethnological and Folk Life Material; and (f) Scientific and Technological Material. The Certificate is awarded in one of these groups and may be awarded with distinction.

The examination takes the form of an inspection of the candidate's work in his museum, oral and practical tests on the duties of the candidates — they may be asked some questions in writing — and an assessment of the candidate's work by the Director of his Museum.

Conservation Certificate. Awarded in collaboration with the City and Guilds of London Institute. This is a professional qualification for museum workers engaged in preparation, preservation and restoration of museum objects.

The examinations are taken after a three-year part-time day-release (or block-release) course at an approved centre. Part 2 is based on a 17-week specialised course. A candidate must be at least 17 years old and must have worked at least six months full-time in a museum, principally on conservation. He should be either an ordinary professional member or student member of the Association and have a good knowledge of English, Mathematics and Science.

The examinations are taken in two parts.

Part 1 is the Science Laboratory Technician's Ordinary Certificate (119) of the City and Guilds of London Institute.

Exemption from Part 1 may be granted to entrants who have had two years' museum experience and hold either a pass degree in an approved scientific subject of Part I examinations for Graduate Membership of the Royal Institute of Chemistry or H.N.C. in Chemistry or Applied Chemistry, or an equivalent qualification.

Part 2 Examinations are conducted by the Association. Candidates are tested in one of the following groups: I Archaeology, Ethnology, Folk Life; II Natural Science; III Decorative Arts; IV Technology. (At the time of writing only group I was in operation.) The syllabus of each subject covers the general effects of atmospherics on museum objects, documentation and photographic records and special techniques related to metals, silicose materials and organic materials.

Exemption from Part 2 is granted only to students who have successfully taken the two-year course on conservation of the Institute of Archaeology of the University of London (*see* page 424, Archaeology), who are eligible for the award of the Association's Conservation Certificate when they have had two years' experience in a museum working on conservation.

UNIVERSITY DIPLOMAS AND CERTIFICATES

University of Leicester: Certificate in Museum Studies. This certificate will be awarded after a 1-year postgraduate course; the first course is expected to begin in October 1966.

University of Liverpool: Diploma in Study of Records and Administration of Archives. This diploma is taken after a 1-year full-time or 2-year part-time course.

University of London (University College): Academic Postgraduate Diploma in Archives Administration. Taken after a 1-year full-time course.

University of Wales (Aberystwyth, Bangor): Diploma in Paleography and Archives Administration. This is taken after a 1-year postgraduate course.

University of Wales (Aberystwyth): Certificate in Paleography. This certificate, taken after a 1-year course, is awarded by the college.

(Special Diplomas in Hebrew and Indian Paleography and Epigraphy are awarded by the School of Oriental and African Studies of London University.)

MUSIC

UNIVERSITY DEGREES AND DIPLOMAS

(i) FIRST DEGREES

Aberdeen. M.A. (Hons.): 4 years. 3 or 4 Higher Grade S.C.E.

passes or 3 'A' level G.C.E. passes including Music, the rest from a list of approved subjects.

Belfast. B.Mus. (Hons.): 4 years. 2 'A' level G.C.E. passes including Music; an 'O' level pass in Mathematics is also required.

Birmingham. B.Mus. (Hons.): 3 years (unless proficiency as a performer is lacking when a preparatory year is necessary i.e. 4-year course). 3 'A' level passes including Music required.

Bristol. B.A. (Hons.): 3 years. 2 'A' level G.C.E. passes including Music; an 'O' level pass in Latin or Classical Greek. Keyboard proficiency is required.

Cambridge. B.A. (Hons.): 3 years. 2 'A' level G.C.E. passes. 'O' or 'A' passes are required in two approved languages other than English, Mathematics or a scientific subject and in the Use of English.

Durham. B.A. (Hons.): 3 years. 3 'A' level G.C.E. passes including Music (or an equivalent qualification in Music); and 'O' level pass in Latin required.

Durham. B.Mus.: this is an external degree; no attendance at the University is necessary.

East Anglia. B.A. in the School of Fine Arts: 3 years. 2 'A' level G.C.E. passes. There are no named subject requirements



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but evidence of a sound education in Arts subjects must be offered. In this course music is combined with history of Art and Architecture.

Edinburgh. B.Mus. (Hons.): 3 or 4 years. 3 or 4 Higher Grade S.C.E. passes or 3 'A' level G.C.E. passes, normally including Music, the rest from a list of approved subjects.

Exeter. B.A.: 3 years. 2 'A' level G.C.E. passes including Music, also an 'O' level pass in Latin. Music can be taken as part of a General Degree course (last students admitted 1964) or as an additional subject in some Honours courses.

Glasgow. B.Mus. (Hons.): 3 years. 3 or 4 Higher Grade S.C.E. passes or 3 'A' level G.C.E. passes including Music and (normally) English and a foreign language.

Hull. B.A. (Spec.): 3 years. 2 'A' level G.C.E. passes including Music (or an equivalent qualification in Music), an 'O' level pass in History or English or a modern foreign language.

Leeds. B.A. (Spec.): 3 years. 2 'A' level G.C.E. passes including Music. Musical proficiency is required.

London (Royal Academy of Music, Royal College of Music, Trinity College of Music). B.Mus. (Hons.): 3 years. 2 'A' level G.C.E. passes; also an 'O' level pass in one of the following: Latin, French, Italian, German, Spanish, Russian.

Manchester. B.A. (Mus.) (Ord.): 3 years. 2 'A' level G.C.E. passes in Arts subjects including Music. Musical proficiency is required.

Manchester. Mus.B. (Hons.): 3 years (unless all-round musical proficiency, including proficiency in performance, is lacking, in which case a qualifying year is necessary and the whole course lasts 4 years). 2 'A' level G.C.E. passes including Music (or an equivalent qualification in Music). This degree also forms part of a joint qualification taken after a 4-year course at the university and at the Royal Manchester College of Music; the course leads to the Diploma of the College as well as to Mus.B.

Newcastle. B.A. (Hons.): 3 years. 2 'A' level G.C.E. passes including Music (or an equivalent qualification in Music); an 'O' level pass in Latin or Classical Greek.

Nottingham. B.A. (Hons.) and B.Mus. (Hons.): 3 years. 2 'A' level G.C.E. passes including Music. A modern foreign language pass at 'A' level is desirable. Keyboard proficiency, or proficiency in another instrument and competency on the Keyboard, is required.

Oxford. B.A. (Hons.): 3 years. Normally 2 'A' level G.C.E. passes. 'O' or 'A' level passes are required in (i) Latin or Classical Greek, (ii) one other approved foreign language, (iii) a mathe-

mathematical or scientific subject, and (iv) one other approved subject from group (ii) or (iii).

Reading. B.A. (Hons.) (in Music or Music and English Literature or Music and German): 3 years. 2 'A' level G.C.E. passes including Music; an 'O' level pass in Latin for the Music and German degree and evidence of instrumental proficiency is required.

Reading. B.Mus.: Selected students take a fourth year of study leading to the B.Mus. degree.

Sheffield. B.A. (Hons.) (in Music and a language): 3 years. 2 'A' level G.C.E. passes in Arts subjects including the specified foreign language; an 'O' level pass in Latin is required for the Music and French and Music and Spanish degree courses.

Sheffield. B.Mus.: 4 years. 2 'A' level G.C.E. passes including Music (or an equivalent qualification in Music). Musical proficiency is required.

Southampton. B.A. (Single Hons.): 3 years. 2 'A' level G.C.E. passes including Music; an 'O' level pass in a modern language other than English is also required.

Southampton. B.A. (Combined Hons.): 3 years. For Music and a language 2 'A' level G.C.E. passes are required in Music and the language to be studied (French, German or Spanish). For Music and Modern History 2 'A' level passes, including Music, are required. For Music and English 3 'A' level passes including Music and English literature.

Wales (Aberystwyth). B.A. (Hons.) and B.Mus. (Hons.): 3 years. 2 'A' level G.C.E. passes including Music.

Wales (Bangor). B.A. (Hons.) and B.Mus. (Hons.): 3 years. 2 'A' level G.C.E. passes including Music. Adequate executive ability is required in one practical subject.

Wales (Cardiff). B.A. (Hons.) and B.Mus. (Hons.): 3 years. 3 'A' level G.C.E. passes preferred. Music and a modern language must be included. Ability in one or more practical subjects is desirable.

(ii) EXTERNAL DEGREES

Courses for the external degrees of **B.Mus. London** are offered at Battersea College of Technology and North-East Essex Technical College and of **B.Mus. Durham** at Battersea College of Technology.

(iii) HIGHER DEGREES

Birmingham. M.Mus.: this requires further study of 1 or 2 years after the B.Mus. degree.

Bristol. B.Mus.: this requires further study of 1 year after the B.A. General Honours or Special Honours degrees in Music; it is for Bristol Graduates only.

Cambridge. Mus.B.: this requires 1 year's further study by candidates holding the Cambridge B.A. degree in Music.

Cambridge. Mus.M.: this degree may be conferred after examination on Cambridge Mus.B.'s of 2 years' standing.

Leeds. B.Mus.: this degree is awarded after 1 year's further study to Leeds University Music graduates and after 2 years to other music graduates.

Oxford. B.Mus.: this degree is open to holders of the Oxford B.A. degree in Music with first or second class Honours; candidates qualify for B.Mus. by means of a written examination and a musical exercise.

Wales. M.Mus.: this requires 1 or 2 years postgraduate research.

(iv) DOCTORATES

Doctorates are awarded for outstanding compositions, publications or other services to Music or on the results of examinations and musical exercises.

Belfast. D.Mus.: this is granted for a composition.

Birmingham. D.Mus.: this can be granted 5 years after the bachelor's degree, 3 years after the master's degree.

Bristol. D.Mus.: this can be granted 5 years after the B.Mus. degree; for Bristol graduates only.

Cambridge. Mus.D.: this can be granted to graduates of at least 8 years' standing.

Durham. D.Mus.

Edinburgh. D.Mus.: this can be granted 3 years after graduation.

Glasgow. D.Mus.: this degree is gained by examination. 3 years' postgraduate research is required of non-Glasgow graduates.

Leeds. D.Mus.: this can be awarded to Leeds graduates in the sixth year after graduation.

London. D.Mus.: the B.Mus. degree of London University must have been taken at least 3 years previously.

Manchester. Mus.D.: can be awarded 4 years after graduation.

Nottingham. D.Mus.: can be awarded to Nottingham graduates of 7 years' standing, and to other graduates of 7 years' standing who have been on the staff at Nottingham for at least 4 years.

Oxford. D.Mus.: this is granted for a major musical work.

Sheffield. D.Mus.: this can be awarded to Sheffield graduates of 6 years' standing (by composition, on thesis and examination).

Wales. D.Mus.:

(v) HIGHER DEGREES OF THE ROYAL COLLEGE OF MUSIC

M.Mus. (R.C.M.) Degree: this postgraduate degree is conferred by the Royal College of Music and calls for scholarship and instrumental performances at a high level.

M.Mus. (R.C.M.) Research Degree: a two-year postgraduate course of study and research leading to this degree is offered by the Royal College of Music.

QUALIFICATIONS AWARDED BY COLLEGES OF MUSIC

(i) POSTGRADUATE QUALIFICATIONS

Master of Music (Royal College of Music) Degree (M.Mus. (R.C.M.)). This is an advanced degree, normally suitable for postgraduate students only, and demanding scholarship and instrumental performance of a high level.

Master of Music (Royal College of Music) Research Degree (M.Mus.(R.C.M.)). This is suitable for postgraduate students only and is taken after a two-year course at the college.

Master of Music, Tonic Sol-fa College of Music (M.Mus. T.S.C.). This is an advanced degree, normally suitable only for postgraduate students, and demands scholarship and instrumental performance at a high level.

(ii) COLLEGE DIPLOMAS—GRADUATE EQUIVALENT

A number of music colleges provide full-time courses at least three years long leading to graduate-equivalent diplomas. These diplomas are recognised for qualified teacher status by the Department of Education and Science.

In Scotland it is necessary for both graduates and all graduate-equivalent diploma-holders to take a two-term course of teacher training in order to obtain qualified teacher status.

Candidates for these courses should have a good standard in music and should normally hold G.C.E. 'O' level or S.C.E. passes in five subjects, including English Language or English. They should be at least 18 years old.

The following colleges offer courses and award graduate-equivalent diplomas:

The Royal Academy of Music, Marylebone Road, London, N.W.1.

The Royal College of Music, Prince Consort Road, London, S.W.7.

Trinity College of Music, Mandeville Place, London, W.1.

The Guildhall School of Music and Drama, John Carpenter Street, London, E.C.4.

The London College of Music, Great Marlborough Street, London, W.1.

The Birmingham and Midland Institute School of Music, Paradise Street, Birmingham, 1.

The Royal Manchester College of Music, Devas Street, Oxford Road, Manchester, 15.

The Northern School of Music, 91, Oxford Road, Manchester, 1.

The Royal Scottish Academy of Music, St. George's Place, Glasgow, C.2.

The Royal College of Organists, Kensington Gore, London, S.W.7.

The following diplomas are available:

The Diploma of Graduate of the Royal Schools of Music (G.R.S.M. (London)). Three-year courses leading to this qualification are held at the Royal Academy of Music and the Royal College of Music, which examine candidates jointly. Students are required to have a good standard of proficiency on a keyboard instrument, in addition to the usual academic qualifications.

The Diploma of Graduate of Trinity College of Music, London (G.T.C.L.). This is taken after a three-year course. Candidates must have G.C.E. passes in either five subjects at 'O' level or three subjects at 'O' level and one other subject at 'A' level or two subjects at 'O' level and two other subjects at 'A' level or three subjects at 'A' level and evidence that other subjects have been studied since the age of 16. Music need not be included.

The Diploma of Graduate of the Guildhall School of Music and Drama (G.G.S.M.). This is taken after a three-year course. The entry requirements are passes in five G.C.E. subjects at 'O' level or an approved combination of 'O' and 'A' level passes.

The Diploma of Graduate of the London College of Music (G.L.C.M.). This is taken after a three-year course. Entry qualifications are a minimum of five G.C.E. 'O' level passes.

The Diploma of Graduate of the Birmingham and Midland Institute School of Music (G.B.S.M.). This is taken after a three-year course. Entry qualifications are a minimum of five 'O' level G.C.E. passes. Candidates should have taken the 'A' level music course at school and should have reached the standard of Grade VII of the Associated Board of the Royal Schools of Music.

The Diploma of Graduate of the Royal Schools of Music (Manchester) (G.R.S.M. (Manchester)). This is taken after a three-year course at the Royal College of Music, Manchester. In addition to the normal academic entry requirements, knowledge of a keyboard instrument is expected.

The Diploma of Graduate of the Northern School of Music (G.N.S.M.). This is taken after a three-year full-time course and in addition to the normal academic entry requirements candidates should have reached Grade VIII of the Associated Board of the Royal Schools of Music in their first study (or any equivalent standard).

The Diploma in Musical Education of the Royal Scottish Academy of Music (Dip.(Mus.Ed.) R.S.A.M.). This is taken after a three-year course. Candidates must have reached a standard of general education satisfactory to the Scottish Education Department (normally two Higher Grade and four Ordinary Grade passes in the S.C.E.).

Even if they have a Higher Grade S.C.E. pass in Music candidates are required to take the Academy's Entrance Examination in Music. The standard required for the pianoforte playing part of this is approximately that of Grade VII of the Associated Board of the Royal Schools of Music.

Fellowship of the Royal College of Organists (F.R.C.O.). Candidates for the Fellowship must be Members of the Royal College of Organists, i.e. proposed and seconded by existing Members and elected by the Council, and also holders of the Diploma of Associate of the College. The Fellowship is obtained by examination, taken in two sections — Paper Work and Organ Playing. There are no specific educational requirements for this qualification.

(iii) COLLEGE DIPLOMAS GIVING QUALIFIED TEACHER STATUS

The entry requirements for courses leading to these diplomas are those demanded by the Department of Education and Science of students intending to teach in maintained schools, i.e. a minimum of five G.C.E. 'O' level passes including English Language.

The diplomas are recognised by the Department as giving qualified teacher status provided that the holder takes a one-year full-time course at a college of education.

These are not graduate-equivalent qualifications. If taken in a full-time course they normally require two to three years' study; they are also awarded to external students.

Licentiate of the Royal Academy of Music (L.R.A.M.).

L.R.A.M. Teacher's Diploma (instrumental or otherwise).

L.R.A.M. Aural Training.

L.R.A.M. Voice Culture and Class Singing.

Associate of the Royal College of Music (A.R.C.M.)

Teacher's Diploma (instrumental or otherwise).

Licentiate and Fellowship of the Trinity College of Music, London (L.T.C.L. and F.T.C.L.).

Licentiate Teacher's Diploma (L.T.C.L.). Instrumental or otherwise, taken at the end of the second year of the course.

Fellowship (F.T.C.L.). This is taken normally after the L.T.C.L. and at the end of the third year of the full-time course. It can also be gained by research work.

Class Music Teacher's Diploma (L.T.C.L. (C.M.T.)).

Associate of the Guildhall School of Music and Drama (A.G.S.M.). This is taken after a three-year course.

Diploma of Licentiate of the Guildhall School of Music and Drama (L.G.S.M.). This is taken after part-time study or a full-time course. It is designed mainly for students who intend to become teachers in private practice but carries qualified teacher status provided the teacher satisfied the conditions described above.

Licentiate Diploma in School Music of the London College of Music (L.L.C.M.(T.D.)). This is taken after a two-year full-time course.

Associate of the Birmingham School of Music (A.B.S.M. (Teacher) and A.B.S.M. (Gen. Mus.)). The A.B.S.M. for instrumental and vocal teachers is normally taken after a three-year course; that in General Musicianship after a two-year course. The A.B.S.M. (Teacher) is also open to external candidates.

Associate of the Royal Manchester School of Music (A.R.M.C.M. and A.R.M.C.M. (School Music)). These qualifications are taken after a three-year course.

Associate Diploma of Music Education for Schools of the Northern School of Music. This is taken after a two-year course. In addition to the usual academic entry requirements, students should have reached Grade VIII of the Associated Board of the Royal Schools of Music in their first study (or an equivalent standard).

Diploma of the Royal Scottish Academy of Music (D.R.S.A.M.(Teacher's)). This is taken after a three-year course. The standard of music required is roughly that of Grade VII of the Associated Board of the Royal Schools of Music.

Students wishing to teach in maintained schools must satisfy the requirements of the Scottish Education Department for prospective teachers—two Higher Grade S.C.E. passes including English and

four Ordinary Grade passes including a mathematical subject.

Licentiate of the Royal Schools of Music (L.R.S.M.) Teacher's Diploma (instrumental or otherwise). This is an external qualification awarded only to overseas students. Students in the United Kingdom would take instead a diploma examination of one of the constituent colleges of the Royal Schools of Music. (Details from the Secretary, the Associated Board of the Royal Schools of Music, 14, Bedford Square, London, W.C.1.)

Diploma in Music, University College, Cardiff. The College grants a Diploma in Music to students who have successfully pursued the courses of study required in Parts I and II (First Year) of the B.A. Pass degree course in Music and have passed the examination in a practical subject.

Candidates must have either five G.C.E. 'O' level passes or three 'O' level and one other at 'A' level or two 'O' level passes and two others at 'A' level. The course lasts two years.

The Teaching Certificates of Dartington College of Arts (Totnes, Devon) (with professional training) and of the **Dalcroze Society** (incorporating the London School of Eurythmics)—now discontinued—also carry qualified teacher status. (Since these courses are only for teachers and do not train performers, they are dealt with in the section on Teaching, page 1004.)

Qualifications awarded by the Tonic Sol-fa College of Music (9, Queensborough Terrace, London, W.2) are accepted by the Scottish Education Department as giving certificated teacher status (after courses of professional training).

(iv) OTHER QUALIFICATIONS

Licentiate of the Royal Academy of Music (L.R.A.M.) Performer's. This can be taken after a full-time course, usually lasting three years, at the Academy or by external students after part-time study. The Licentiate is conferred in a wide range of musical subjects.

Associate of the Royal College of Music (A.R.C.M.) Performer's Course. This is taken after a three-year full-time course at the College or by external candidates after part-time study. Intending performers taking this course need have no specific educational qualifications for entry and the Diploma is offered in most practical subjects.

Associate of the Trinity College of Music, London (A.T.C.L.). This qualification is taken externally by intending performers and private teachers. Associateship examinations are available in the following subjects:

Ear Tests.

Pianoforte (Teacher or Performer).

Organ (Teacher or Performer).

Violin (Teacher or Performer).

Solo Singing (Teacher or Performer).

Licentiate of the Trinity College of Music, London (L.T.C.L.).

Students of the Trinity College of Music take the Licentiate Examination at the end of their second year and proceed to take the Fellowship (F.T.C.L.) at the end of their third year.

Intending performers taking the L.T.C.L. course need have no specific educational qualifications for entry. These courses may also be taken externally and are awarded in a wide range of instruments and also in conducting. Candidates need not first qualify as Associates of the College.

Diploma of Licentiate of the Guildhall School of Music and Drama (L.G.S.M.). This course is designed for students who intend to become teachers in private practice and for performers. It may be taken after part-time study or a full-time course, the length depending on the student's standard on entering the course. No specific educational qualifications are required, unless the student wishes to teach in a maintained school (*see above*).

Licentiate (Teacher) in a Musical Subject of the London College of Music (L.L.C.M.(T.D.)). This is a diploma in a practical musical subject. If gained by 1963 it is recognised as giving qualified teacher status by the Department of Education and Science. It is no longer so recognised but remains a qualification for private teachers of the subject specified. Examinations are conducted in Pianoforte, Violin and Singing.

Associate (Performer) and Licentiate (Performer) of the London College of Music (A.L.C.M. and L.L.C.M.). This can be taken in a musical subject or in speech.

Diploma of Fellowship of the London College of Music (F.L.C.M.). This qualification can be taken (1) as a Performer in Music or in Speech or (2) as a Composer. Candidates who enter for the Fellowship Diploma must hold the L.L.C.M. (Performer) or the L.L.C.M.(T.D.) and must be at least 18 years of age. This Diploma is also granted to those who hold the L.L.C.M. in a practical subject and the L.Mus. L.S.M. Diploma.

Diploma of Associate of the Birmingham School of Music (A.B.S.M.) (Performers). This is normally taken after a three-year course, but can be taken by external candidates also. The course is taken in a principal and secondary practical study, one of which must be a keyboard instrument.

Diploma of Associate of the Royal Manchester College of Music (A.R.M.C.M.) (Performer's Course). This usually requires three to four years' full-time attendance at the college, although exceptional students may take the Diploma after a two-year full-time course. Diplomas are conferred in singing and in most musical instruments.

There are no minimum educational requirements for entry to this course.

Diploma of the Royal Scottish Academy of Music (D.R.S.A.M.) (Performer's Course). This is normally a three-year course. Admission is by competitive examination; evidence of general education is taken into account in selecting students, but no specific standard is required. The music standard required for those who wish to become performers is approximately that of Grade VIII (Final) of the Associated Board of the Royal Schools of Music. For those who wish to teach privately, the standard approximates to Grade VII (Advanced).

Associateship of the Royal College of Organists (A.R.C.O.). Candidates must be members of the Royal College of Organists, i.e. proposed and seconded by existing members and elected by the Council.

The Associateship is obtained by examination taken in two sections, Paper Work and Organ Playing. There are no specific educational requirements for admission to the examination.

Choir-training Diploma of the Royal College of Organists (C.H.M.). This examination is open to Fellows and Associates of the Royal College of Organists.

It consists of a Paper Work examination and also a viva voce and practical test. The letters (C.H.M.) are written after the membership letters thus: A.R.C.O. (C.H.M.), F.R.C.O. (C.H.M.).

Certificate in Choir-training of the Royal College of Organists. All members of the Royal College of Organists (i.e. subscribers to the body) may take this examination. It is of a lower standard than the Diploma and consists of Paper Work and practical and viva voce tests.

No designatory letters are granted for the qualification.

Both these Certificates are designed to help those engaged in training church choirs.

Diploma of Associate in Music of the Trinity College of Music (A.Mus.T.C.L.). This is an external examination in the theory and practice of composition.

Licentiate in Music of the Trinity College, London (L.Mus.T.C.L.). This is a more advanced examination for external candidates in the theory and practice of composition.

Diploma of Associateship in Music of the London College of Music (A.Mus.L.C.M.). This qualification is gained by an examination in musical theory.

Diploma of Licentiate in Music of the London College of Music (L.Mus.L.C.M.). This qualification is also gained by examination in musical theory; candidates must have gained the A.Mus.L.C.M.

Fellowship of the Tonic Sol-fa College of Music (F.T.S.C.) is granted to Licentiates of the college who either hold a university degree in Music or who hold the college's Certificates in any two of the following three groups: A — Counterpoint Stage II and Musical Composition Stage III; B — Musical Composition Stage IV; C—one of orchestration, solo singing, pianoforte playing, organ playing.

Licentiate of the Tonic Sol-fa College of Music (L.T.S.C.). Associates of the college may be elected to licentiatehip if they hold one of the following qualifications:

- (i) Advanced Grade Staff Notation, practical and theory; Advanced Grade Sol-fa Notation, practical and theory.
- (ii) **A Licentiate Certificate of the College.** These are awarded in the following subjects: general musicianship; pianoforte (performance and teaching, i.e. private teaching); solo singing (performance and teaching); organ.

All examinations are practical and theoretical, covering theory, hearing form and history. The examination for teachers differs slightly from that for performers.

Associates of the Tonic Sol-fa College of Music (A.T.S.C.). Members of the college may be elected to Licentiatehip if they hold one of the following qualifications:

- (i) Matriculation (practical and theory) examination of the college.
- (ii) **An A.T.S.C. Certificate.** These are awarded in the following subjects: general musicianship; solo singing (performance and teaching); pianoforte (performance and teaching); organ.

The examinations are practical and theoretical, covering theory, harmony and form.

Membership of the Tonic Sol-fa College (M.T.S.C.) is open to those who hold the following college certificates: Intermediate Practical (Sol-fa or Staff); Intermediate Theory (Sol-fa or Staff); School Teacher's Music Certificate.

School Teacher's Music Certificate of the Tonic Sol-fa College of Music (S.T.M.C.). The examinations for this Certificate are open to candidates who are over 16 years old. The

examination is practical and theoretical. The Certificate, which may be as 'pass' or 'pass with distinction', is not a qualification for teaching in maintained schools but only for private teaching.

Licentiate in Music, Tonic Sol-fa College of Music (L.Mus.T.S.C.). Candidates for this Diploma must hold the A.Mus.T.S.C. Diploma (*see below*). The examination consists of four papers: harmony and counterpoint; musical history and form; theory of teaching; orchestration. This is not a qualification for teaching in maintained schools.

Associate in Music, Tonic Sol-fa College of Music (A.Mus.T.S.C.). The examination for this Diploma consists of three papers: harmony and counterpoint; musical history and form; theory of teaching. This is not a qualification for teaching in maintained schools.

Schools' Practical (Special) Certificate in Music of the Tonic Sol-fa College. The syllabus for this Certificate is intended to provide a general course in music for school children who have not taken G.C.E. in music. It is designed to be useful for those who are going on to train as primary school teachers. The examinations are practical tests of sight reading and singing, with an optional additional test for candidates who wish to have their certificates endorsed 'with Distinction'.

The Archbishop of Canterbury's Diploma in Church Music (A.D.C.M.). This qualification is open to communicant members of the Church of England. Only those who have already obtained the Fellowship Diploma and the Choir-training Diploma of the Royal College of Organists are eligible to enter for the examination. The examination takes the form of a written paper and a viva voce examination.

The Archbishop of Canterbury's Certificate in Church Music. This is awarded in Grades I to IV. It is awarded by the Incorporated Guild of Church Musicians.

(v) HONORARY MEMBERSHIPS

Fellow of the Royal Academy of Music (F.R.A.M.). This distinction is conferred on past students of the Academy who have distinguished themselves in any of the subjects which form part of the course at the Academy. There are 250 Fellows.

Honorary Fellow of the Royal Academy of Music (Hon. F.R.A.M.). Honorary Fellows are friends of the Royal Academy who have rendered it service and are not professional musicians.

Honorary Member of the Royal Academy of Music (Hon.

R.A.M.). Honorary Members are distinguished musicians of any country elected by the Committee of Management.

Associate of the Royal Academy of Music (A.R.A.M.). This diploma is conferred on past students of the Academy who have achieved musical distinction.

Fellowship of the Guildhall School of Music and Drama (F.G.S.M.). This award is granted for musical distinction.

Fellow of the Royal Manchester College of Music (F.R.M.C.M.). This is an honorary award conferred on past students who have attained distinction in their subsequent careers.

GRADE EXAMINATIONS

The examinations are designed to mark the progress of learners in various musical skills. The certificates awarded are not, strictly speaking, qualifications, although Grades VII and VIII are sometimes used to indicate the standard required of entrants by colleges training professional musicians.

Grade examinations for those learning various instruments are conducted by the Associated Board of the Royal Schools of Music, Trinity College of Music, Guildhall School of Music and Drama and the London College of Music.

(i) THE ASSOCIATED BOARD OF THE ROYAL SCHOOLS OF MUSIC (incorporating The Royal Academy of Music; The Royal College of Music; The Royal Manchester College of Music; and The Royal Scottish Academy of Music).

The Grades of Examinations are:

I	Primary	V	Higher
II	Elementary	VI	Intermediate
III	Transitional	VII	Advanced
IV	Lower	VIII	Final

Candidates may be entered in any grade irrespective of age and without previously having taken any other grade in the same subject.

There is no compulsory written work for Grades I to IV. Candidates for practical Grades VI, VII and VIII must previously have passed theory Grade V.

Examinations are offered in Theory of Music (written) and in the following practical subjects: Pianoforte, Pianoforte Duets, Organ, Violin, Viola, Violincello, Double Bass, Singing, Harp, Wind Instruments, General Musicianship.

A Special Certificate is granted to candidates who pass Grades V, VI, VII and VIII successfully in the same subject.

(ii) TRINITY COLLEGE OF MUSIC, LONDON

The Grades of Examination are:

I	First Steps	V	Intermediate
II	Preparatory	VI	Senior
III	Advanced Preparatory	VII	Advanced Senior
IV	Junior	VIII	Higher Vocal

Examinations are conducted in the following subjects:

Pianoforte, organ, violin, solo, singing, pianoforte duet, recorder solo, recorder ensemble, brass ensemble, class singing, musicianship, harpsichord, harp, viola, violincello, double bass, percussion bands, orchestral, military and brass band wind instruments.

Passes in the Musicianship examinations will give exemption from the viva voce part of certain practical grade examinations. Certificates are awarded as 'Pass', 'with Merit' and 'with Honours'.

Certificates of special merit are granted to those who have passed all the listed grades in the following subjects:

Piano: I, II (or III), IV, V, VI (or VII), VIII

Violin: I, II, IV, V, VI (or VII), VIII

Musicianship: I, II (or III), VI, V, VI, VII, VIII

Solo singing

Organ

Viola

Violincello

Recorder Solo

} II, IV, V, VI, VIII

If Honours marks, 85% and over, have been obtained in these grades an Honours Certificate of Special Merit will be awarded.

(iii) GUILDHALL SCHOOL OF MUSIC AND DRAMA

Grades of Examinations are:

Introductory Examination

Preliminary Examination

Junior Examination

Grade 1 Grade 5

Grade 2 Grade 6

Grade 3 Grade 7

Grade 4 Grade 8

Any candidate may enter for any Grade without having previously taken any other Grade.

Examinations are conducted in the following subjects:

Practical

Pianoforte: All Grades, Introductory to 8

Pianoforte accompaniment: Grade 8

Organ: Grades 4, 6, 7 and 8
 Violin: All Grades, Introductory to 8
 Viola: Grades 1 to 8
 Violincello: Grades 1 to 8
 Wind Instruments: Grades 2, 4, 6 and 8
 Singing: Grades 1 to 8
 Guitar: Grades 3, 5, 7 and 8

Theoretical

Rudiments of Music: Introductory, Preliminary and Grades 1, 2, 3, 4 and 6.

Melody and Harmony: Grades 2, 4, 5, 7 and 8

In most subjects there are alternative forms of examination for Grade 8, designed as a preparation for the Performer's or the Teacher's Diploma.

Certificates are awarded as 'Pass', 'with Merit' and 'with Honours'.

Passes in the Rudiments of Music examinations will give exemption from the viva voce part of certain grade examinations in practical subjects.

Exemptions are given from the paper work sections of some Grade 8 examinations for passes in Grade 5 or above in Melody and Harmony or on Grade 6 and above in Rudiments of Music.

A Special Junior Certificate may be awarded to any candidate who has passed either Grades 1, 2, 3 or 4 in a practical subject or Grades 1, 2, 3, 4 and 6 in the Rudiments of Music.

A Special Senior Certificate may be awarded to any candidate who has passed Grades 5, 6, 7 and 8 in a practical subject.

A Special Honours Certificate is awarded to the candidate in each grade and subject who passes with the highest total of marks in honours.

(iv) LONDON COLLEGE OF MUSIC

The Grades of Examination are:

Introductory Examinations

Grade I:	Primary
Grade II:	Elementary
Grade III:	Transitional
Grade IV:	Intermediate

Step I, Step II, Step III

Grade V:	Advanced Intermediate
Grade VI:	Senior
Grade VII:	Higher Senior
Grade VIII:	Advanced Senior

Examinations are conducted in the following subjects:

Ear Tests: Grades I to VIII

Theory of Music: Grades I to VIII

Pianoforte: Steps I, II and III, Grades I to VIII

Pianoforte Duet: Easy, Moderate and Advanced Grades

Singing: Grades I, II, III, IV, VI and VIII

Violin: Preliminary examination and Grades I to VIII

Violincello: Grades II, IV, VI and VIII

Trumpet (or Cornet): Grades II, IV, VI and VIII

Organ: Grades II, IV, VI and VIII

General Musicianship: Grade II (normally taken following Grade II success in Pianoforte); Grade IV (normally taken following Grade IV success in Pianoforte); Grade VI (normally taken following Grade V or VI success in Pianoforte); Grade VIII (normally taken following Grade VII success in Pianoforte).

Exemption from the viva voce sections of the practical Grade examinations are granted for passes at certain Grades in the theory examinations. Certificates are granted as 'Pass', 'First Class' and 'with Honours'.

Cumulative Certificates are granted to candidates who pass in order all grades from I to VIII in the following subjects: Pianoforte, Singing, Violin and Organ.

(v) TONIC SOL-FA COLLEGE OF MUSIC

Examinations are conducted at the following grades:

Preliminary practical

Grade I Junior

Grade II Elementary

Grade III Intermediate

Grade IV

Grade V

Grade VI

Grade VII

Grade VIII

In the following subjects:

General Musicianship: Preliminary and Grades I, II and III.

Special Certificate in Tonic Sol-fa Notation: Preliminary and Grades I, II and III.

Solo singing: Grades I to IV.

Pianoforte: Grades I to VIII.

Organ: Grades IV, V, VI and VIII.

OTHER QUALIFICATIONS

Members of the Incorporated Society of Musicians are full-time professional musicians who are elected to the Society.

Student Members are those undertaking full-time music training and **Associates** are those musicians who are ineligible for full membership because they undertake only part-time musical work.

This is an occupational society, concerned with the welfare of musicians.

MUSICAL INSTRUMENT TECHNOLOGY

The Institute of Musical Instrument Technology

The London College of Furniture, Pitfield Street, London, N.1

(i) CORPORATE MEMBERS

Fellows (F.I.M.I.T.) are elected in recognition of distinguished service to the profession or the Institute.

Members (M.I.M.I.T.) must be at least 25 and have had at least seven years' experience in musical instrument manufacture or maintenance, five of these being in a position of responsibility. They must also hold technical qualifications in the craft.

(ii) NON-CORPORATE MEMBERS

Associates must be at least 20 and have worked and received instruction in the craft for at least two years. They must also have passed the Graduateship Examination; or submit a thesis or paper on an approved subject; or produce other evidence of competency.

Graduates are those who have passed the Graduateship Examination but do not yet satisfy the other requirements for Associateship.

Students are those employed in the craft and studying for the Institute's examination.

(iii) EXAMINATION

The Graduateship Examination is usually taken by apprentices, who are indentured for five years to a manufacturer and study part-time at a technical college. It consists of G.C.E. 'A' level Mathematics; a thesis on the acoustics of musical instruments (3,000 words); a thesis on an instrument of the candidate's choice (one of these theses must contain original material); and an example of the apprentice's work in manufacture or in tuning and

repairs. Successful candidates may be admitted to Membership of the Institute.

Craftsmanship Certificates are also awarded by the Institute to mark ability shown in an apprentice's work.

OTHER QUALIFICATIONS

National Diploma for Blind Pianoforte Tuners awarded by the College of Teachers of the Blind (Royal School for the Blind, Westbury-on-Trym, Bristol). This Diploma is normally taken after a four-year training course at a recognised Institute for the Blind, although candidates may be allowed to enter if they have taken a comparable course of training. The course aims to bring the student to the standard reached in an apprenticeship with a manufacturer.

The examination consists of three sections.

Section 1: the candidate is required to show his ability in one of the following: doing chipping up; tuning a piano at the existing pitch; raising or lowering the pitch.

Section 2: a practical test of diagnosis and correction of faults and repairs.

Section 3: a viva voce examination of the general construction of pianos and on professional and commercial matters.

Candidates who obtain 60% of possible marks in each section are granted a Pass Diploma; those who obtain 80% an Honours Diploma.

NATUROPATHY

The British Naturopathic Association Ltd.

Frazer House, 6, Netherhall Gardens, London, N.W.3

The British Naturopathic Association maintains a Register of Naturopaths who have either passed the entrance examinations or otherwise satisfied the requirements of its Board of Examiners and Executive Council. In 1952 the Register was closed to all practitioners other than successful students of the British College of Naturopathy.

The College awards **Diplomas in Osteopathy (D.O.)**, **Naturopathy (D.N.)** and **Chiropractice (D.C.)**. The Diploma in Naturopathy is awarded after a course in the essentials of naturopathic practice, which are the recognition of the unity of

disease and the treatment of the patient not the symptoms, the recognition that acute disease is a manifestation of the Vital Force and that it is therefore not to be suppressed and the use of dietetics, fasting, light, water, exercise, psychological and other adjustments as primary factors in the treatment of acute and chronic disease.

NAVAL ARCHITECTURE

The Royal Institution of Naval Architects

10, Upper Belgrave Street, London, S.W.1

Honorary Members are those on whom the Council sees fit to confer honorary distinction.

Members (M.R.I.N.A.) must be at least 30 years of age and must possess qualifications required for Associate Membership. They must also have seven years' experience at a sufficiently responsible level, or five years if applying for transfer from Associate Membership. Alternatively, the candidate must have had suitable educational and professional training in Shipbuilding or Marine Engineering and have been employed for at least 10 years in positions of responsibility in the design or execution of important Shipbuilding or Marine Engineering work.

Associate Members (A.M.R.I.N.A.) must be at least 25 years of age and be employed either in the design or repair or maintenance of ships or their main or auxiliary machinery, or as a professional superintendent of a shipping firm, or in a technical capacity in a research or educational establishment engaged in Naval Architecture or Marine Engineering, or in a technical capacity in a public or private establishment dealing with ships or their main and auxiliary machinery.

In addition, they must have passed an examination of university degree standard or obtained the professional certificate of the Royal Naval College, Greenwich, or passed through the Admiralty course for engineer officers of the Royal Navy and attained the rank of lieutenant.

A candidate unable to qualify academically under either of these alternatives must produce such other evidence of his general education and scholastic attainments.

In addition, candidates are required to have (i) served an apprenticeship or pupilage in Shipbuilding or Marine Engineering for five years, or in special circumstances a period to the satisfaction

of the Council, or (ii) undergone a mixed training of at least four years in Shipbuilding or Marine Engine works, and partly in a school of Naval Architecture or Engineering recognised by the Council of the Institution, or (iii) have been regularly educated by apprenticeship or pupillage in Shipbuilding or Marine Engineering apprenticeship or pupillage or in a technical school, as a civil, mechanical, aeronautical or electrical engineer, and been subsequently professionally employed for at least five years on the design or construction or repair or maintenance of ships or their main and auxiliary machinery.

Associates must be at least 25 years of age and have a suitable general education. Candidates must show that they are qualified by profession or occupation or by scientific or other attainment to co-operate in advancing the objects of the Institution.

Students must be at least 18 years of age but less than 25 and be either apprentices or articed pupils in Shipbuilding or Engineering or taking a recognised course in Naval Architecture or Engineering. In addition the candidates must have an acceptable standard of education, i.e. one of the following:

Successful completion of the course at one of H.M. Dockyard Technical Colleges; success in a matriculation or entrance examination required for entry upon a course of study leading to a degree at any university in the British Commonwealth. In such an examination a candidate must have passed in Mathematics and Science; the G.C.E. with passes at 'O' level in English Language, Mathematics, a science subject and two other subjects, or equivalent; Common Preliminary Examination of the Engineering Joint Examination Board; a National Certificate in Naval Architecture.

UNIVERSITY DEGREES

Honours degree courses are conducted at the following universities. For details of higher and other degrees refer to the entries for individual universities in Part 4.

Newcastle. B.Sc.: 3 or 4 years. 2 'A' levels required, in Physics and Mathematics (for 3-year course).

Glasgow. B.Sc.: 4 years. 3 'A' levels required including Pure and Applied Mathematics, Physics preferred.

Strathclyde. B.Sc.: 4 years. 2 'A' levels including Pure and Applied Mathematics.

NATIONAL CERTIFICATES

Students may be accepted for part-time **H.N.C.** and **O.N.C.**

courses; there is no prescribed entry requirement—candidates are considered on their merits.

COLLEGE ASSOCIATESHIPS AND DIPLOMAS

Robert Gordon's Technical College, Aberdeen: Diploma in Naval Architecture.

Courses are also conducted at the Royal Naval College, Manadon, and the Royal Naval College, Greenwich.

NAVIGATION AND SEAMANSHIP

The Institute of Navigation

The Royal Geographical Society, 1, Kensington Gore,
London, S.W.7

Honorary Members are distinguished persons on whom the Institute wishes to confer an honorary distinction.

Fellows (F.I.N.) are Members of at least three years' standing, holding certain qualifications, which include having made a contribution of value to Navigation.

Members (M.I.N.) must be not less than 21 and must satisfy the Institute of their interest in Navigation.

Student Members must be under 25 and be studying at a recognised school or university with a view to making Navigation or an allied interest their career.

Corporate Members are companies, schools, universities, Government departments and similar organisations at home and abroad who are directly or indirectly interested in the science of Navigation.

UNIVERSITY DEGREE

Welsh C.A.T. B.Sc.(Tech.) Honours or Pass in Maritime Studies: 3 years or 4 year sandwich. Entry requirements: two G.C.E. 'A' level and three 'O' level passes, or O.N.D. in Nautical Science, or a First Mate's Certificate of Competency, or the College's Intermediate Examination in Science.

The degree course enables students to work concurrently for their Board of Trade Certificates of Competency as Merchant Navy Navigating Officers. Success in the degree examinations may carry exemptions from the appropriate parts of the Master's Certificate examinations.

NATIONAL DIPLOMA

The Ordinary National Diploma (O.N.D.) in Nautical Science was instituted by the Department of Education and Science and the Merchant Navy Training Board in 1965. The course is intended to provide an alternative method of training navigating cadets. It consists of at least six months' study in a Nautical College or nautical department of a college of further education, followed by six months' sea training and a further six months' study; both periods of study are full-time. Candidates must obtain a total of 12 months' sea service before the Diploma is awarded.

The admission requirements will probably be at least four G.C.E. 'O' level passes (or the equivalent), including Mathematics, an appropriate science subject and English. The syllabus for the Diploma will probably include Mathematics and Physics (to about G.C.E. 'A' level), navigation, ship knowledge, seamanship and communications, with general studies.

Holders of the O.N.D. will be granted specified remission from the sea service required for the Second Mate's Certificate of Competency, exempted from the academic parts of the examinations for both the Second Mate's and First Mate's Certificates. On completion of the two-year course cadets will undertake the remainder of the sea service required before taking those parts of the Second Mate's Certificate examination for which no exemption has been granted.

NAVIGATING OFFICERS

The Merchant Shipping Acts, 1894 and 1906, require that all British ships should carry various grades and combinations (depending on their size and destinations) of duly certificated officers.

Duly certificated officers are those who hold a valid certificate issued under the Merchant Shipping Acts of a grade appropriate to their station in their ship or of a higher grade. **Certificates of Competency** are issued by the Minister of Transport (formerly by the President of the Board of Trade). The examinations conducted by the Ministry of Transport's Central Board of Examiners are for the following Certificates of Competency.

Second Mate (foreign-going). Candidates must be at least 20 and have served four years at sea on foreign-going ships or have service deemed to be equivalent. Candidates must obtain a Radar Observer Certificate (*see below*).

The examination consists of six written papers and oral and practical tests. The written papers, with the required percentage pass mark, are as follows:

General Ship Knowledge (Pass/Fail); Chart Work (70%); Practical Navigation (70%); Mathematics (50%); Principles of Navigation (50%); English (50%).

The oral and practical tests include Signals (British Semaphore, Morse Code and the International Code of Signals).

First Mate (foreign-going). Candidates must be not less than 21 and have served five years at sea on foreign-going ships or have service deemed to be equivalent. Sea service must include at least a year on a foreign-going ship in a capacity not less than third of three watch-keeping officers whilst holding a certificate as Second Mate (foreign-going).

The examination consists of six written papers and oral and practical tests. The written papers, with the required percentage pass mark, are as follows:

Practical Navigation (70%); Chart Work and Pilotage (70%); Ship Construction and Stability (50%); Meteorology (Pass/Fail); Ship Maintenance, Routine and Cargo Work (50%); Elementary Magnetism, Electricity and the Gyro Compass (Pass/Fail).

The oral and practical tests include Signals (*as above*).

Master (foreign-going). Candidates must be not less than 23 and have served seven years at sea on foreign-going ships or have service deemed to be equivalent. Sea service must include not less than two years on a foreign-going ship in a capacity not lower than third of three watch-keeping officers whilst holding a certificate not less than Second Mate (foreign-going); and not less than 18 months on a foreign-going ship in a capacity not lower than third of three watch-keeping officers whilst holding a certificate not less than First Mate (foreign-going). Candidates who hold a Certificate of Service as Master (*see below*) may be examined for a certificate of competency without producing evidence of sea service.

The examination consists of six written papers and oral and practical tests. The written papers, with the required percentage pass mark, are as follows:

Practical Navigation (70%); Magnetic and Gyro Compass (50%); Ship Construction and Stability (50%); Shipmaster's Business (50%); Elementary Engineering and Electricity including Electronic Navigational Aids (Pass/Fail); Meteorology (Pass/Fail).

The oral and practical tests cover the major responsibilities of Masters and Signals (*as above*).

Extra Master. The examination for the Extra Master's certificate is voluntary and is intended for officers who wish to show

their superior qualifications and to have certificates of the highest grade issued by the Ministry.

Candidates are examined orally in Seamanship. The written examination is in two parts and candidates may take either part first or both parts together. Candidates must get 70% of the total marks in each part separately and must reach a minimum of 50% in each subject. Success in parts of the examination are recorded by an endorsement on the candidate's Master's (foreign-going) certificate.

The subjects of the written examination are as follows:

General; **Part A:** Commercial and Legal Knowledge; Ship Construction and Maintenance; Chart Construction and Marine Surveying; Meteorology, Oceanography and Economic Geography; **Part B:** Mathematics; General Physics; Magnetism and Electricity; Theoretical Naval Architecture and Hydrostatics; Navigation and Navigational Aids.

Mate (home trade). Candidates must be not less than 20 and have served four years at sea. Candidates must obtain a Radar Observer Certificate (*see below*).

The examination consists of four written papers and oral and practical tests. The written papers, with the required percentage pass mark, are as follows:

Chart Work and Pilotage (70%); Practical Navigation (70%); Elementary Ship Knowledge (50%); English Essay (Pass/Fail).

The oral and practical tests include Signals.

Master (home trade). Candidates must be at least 23 and have served five years at sea. Sea service must include one year in a capacity not lower than that of First Mate of a home trade or coasting vessel whilst the candidate was holding a certificate as a Mate (home trade) or Second Mate (foreign-going); one and a half years must have been in a capacity not lower than Second Mate of a home trade or coasting vessel in charge of a watch whilst the candidate was holding a certificate as a Mate (home trade) or Second Mate (foreign-going); one and a half years must have been in a capacity not lower than Third Mate in charge of a watch on a foreign-going ship whilst holding a certificate as Mate (home trade) or Second Mate (foreign-going); or two and a half years must have been in a capacity not lower than Third Mate in charge of a watch in a home trade or coasting ship whilst holding a certificate as Mate (home trade) or Second Mate (foreign-going). Candidates who hold a Certificate of Service as Master (*see below*) may be examined for a certificate of competency without producing evidence of sea service.

The examination consists of five written papers and oral and practical tests. The written papers, with the required percentage pass mark, are as follows:

Chart Work and Pilotage (70%); Practical Navigation (70%); Stability and Seaworthiness (50%); Compass Deviation (Pass/Fail); English (Pass/Fail).

The oral and practical tests include Radar and Signals.

Certificates of Service. Royal Navy Lieutenants who have had seven years' sea service in sea-going ships (not less than three of which were performed whilst holding a full watch-keeping certificate) may apply for a **Certificate of Service as Master** of a foreign-going ship without examination; the Certificate does not qualify the holder to go to sea as Master or Mate of a home trade passenger ship. Naval officers holding a Certificate of Service as Master may be examined for a Certificate of Competency as Master (foreign-going) or Master (home trade) without producing evidence of sea service and without taking the examination for a lower grade certificate.

The service of other naval officers and ratings in sea-going ships of the Royal Navy may be accepted as qualifying sea service.

Candidates for a Certificate of Competency as Second Mate or Mate (home trade) who have either an Admiralty Trade Certificate as Radar Plot rating First Class or Plotting and Radar Instructor or an Admiralty certificate as successfully completing the H.M.S. 'Dryad' Navigation course (with service as a Lieutenant) are exempted from the requirement to produce a valid Radar Observer Certificate.

First Aid Certificates. All candidates for Certificates of Competency as Master or Mate must have obtained a **Certificate of Proficiency in First Aid** issued by:

St. John's Ambulance Association (10, Grosvenor Crescent, London, S.W.1); St. Andrew's Ambulance Association (98-108, North Street, Glasgow, C.3); British Red Cross Society (14, Grosvenor Crescent, London, S.W.1)

or by another suitable body; or have a certificate issued by a naval medical officer.

Sailing Ship Endorsements. Candidates for a sailing ship endorsement in any grade must have had 12 months' service in the foreign trade or 18 months' service in the home trade in a square-rigged sailing ship (this may include sailing ships with auxiliary engines). Candidates may be examined for a sailing ship endorsement of any grade at the same time as they are examined for a Certificate of Competency of the same or a higher grade. Candidates who wish to be examined for a sailing ship endorsement

only must have a Certificate of Competency of at least the same grade as the endorsement they require.

Voluntary Examination in Signalling. Candidates for or holders of a Certificate of Competency of any grade may take a voluntary examination in signalling; successful candidates may have their Certificates endorsed. The examination includes the International Code, Morse Flashing and Semaphore.

Endorsement of Certificates. Masters and Mates may have their Certificates of Competency endorsed if they have obtained:

The Postmaster-General's Certificate of Competence in Radiotelegraphy

The Ministry of Transport's Radar Maintenance Certificate

The Ministry of Transport's Radar Observer Certificate

or have successfully completed a Radar Simulator Course approved by the Ministry of Transport; or have passed the examination for a Sailing Ship Endorsement (*see above*) or the voluntary examination in Signalling (*see above*).

TRAINING

Candidates must have served on deck for four years before they may be admitted to the first Certificate of Competency, but the period may be reduced if they have taken an approved course of pre-sea training at a nautical school. Schools are of two types. **Residential Nautical Schools** provide several years' full-time education, which may count as the equivalent of up to one year's qualifying sea service for admission to the examination for a Certificate of Competency as Second Mate (foreign-going) or Mate (home trade). The age of entry to the schools varies between 13 and 16 and the length of course between one and five years. The recognised schools are as follows:

Reardon Smith Nautical College (Plasmawr Road, Fairwater, Cardiff); Gordonstoun (Nautical Department) (Elgin, Morayshire); The H.M.S. *Conway* Merchant Navy Cadet School (Llanfair P.G., Anglesey); The Incorporated Thames Nautical Training College (H.M.S. *Worcester*, Ingress Abbey, Greenhithe, Kent); The Nautical College (Pangbourne, Berkshire); School of Nautical Training *Mercury* (Hamble, Southampton); University of Southampton School of Navigation (Warsash, Southampton).

Technical Schools and similar establishments provide a special course of nautical instruction for boys who intend to go to sea, which may count as the equivalent of up to six months' service for admission to the examination for a Certificate of Competency as

Second Mate (foreign-going) or Mate (home trade). The establishments are as follows:

Robert Gordon's Technical College, Aberdeen; City of Belfast College of Technology; School of Navigation, Bristol Technical College; Dundee Technical College; Fleetwood Navigation School; School of Navigation, University of Strathclyde; Watt Memorial School, Greenock; Grimsby College of Further Education; Kingston-upon-Hull High School for Nautical Training and Kingston-upon-Hull Nautical College and Trinity House Navigation Schools, Kingston-upon-Hull; Leith Nautical College; Riversdale Technical College, Liverpool; King Edward VII Nautical College, London; London Nautical College; School of Navigation, Plymouth College of Technology; The South Shields Marine and Technical College; Lews Castle College (Stornoway, Isle of Lewis).

The period of apprenticeship, which is entered between 16 and 17½, is usually four years for those who have had no pre-sea training and three or three and a half years for those who have taken an approved training ship or nautical school course. Candidates with 5 G.C.E. passes, including two at 'A' level (or the equivalent) may have the period reduced by a further 9 months.

CERTIFICATES OF COMPETENCY FOR THE SKIPPERS AND SECOND HANDS OF FISHING BOATS

In accordance with the Merchant Shipping Acts, 1894 to 1958, the Minister of Transport conducts examinations for the following Certificates of Competency:

Certificate of Competency as Skipper (Full); Certificate of Competency as Second Hand (Full); Certificate of Competency as Skipper (Limited); Certificate of Competency as Second Hand (Limited); Certificate of Competency as Second Hand (Special).

Certificate of Competency as Skipper (Full). The 'Full' certificates of competency are valid for use on all fishing boats in all waters.

Candidates must be not less than 21, have served five years at sea (in a deck capacity), of which one year must have been as a certificated Second Hand on fishing boats of 25 tons gross tonnage or above, produce satisfactory evidence of their year's service as Second Hand and hold a Second Hand's Certificate issued before 1st July, 1937, or a Second Hand (Full) Certificate or a Skipper (Limited) Certificate.

The examination is divided into three parts, written, oral and signalling. The written papers, with the required percentage pass mark, are as follows:

Practical Navigation I and II (70%); Chartwork and Pilotage (70%); Navigational Aids (including Electronic Aids) (50%); Ship Stability (Pass/Fail).

Certificates of Competency as Second Hand (Full) and Second Hand (Limited). The 'Full' certificates of competency are valid for use on all fishing boats in all waters; the 'Limited' certificates are only accepted for boats which do not go north of latitude 60°N. or south of latitude 48°30' N. or west of longitude 12°W.

Candidates must be not less than 19 and either have served four years at sea (in a deck capacity), of which at least two must have been on board deep-sea fishing boats, or have served faithfully four years as indentured apprentices to the sea fishing industry, of which at least two-thirds must have been actually served at sea fishing. The total period of service required may be reduced by up to 12 months by satisfactory attendance at a recognised training establishment (*see below*).

Candidates for certificates as Second Hands (Full) may, if they wish, be examined at the same time for a Second Hand (Special) Endorsement.

The examination for the 'Limited' certificate is divided into three parts, written, oral and signalling. The written papers, with the required percentage pass mark, are as follows:

Chartwork and Pilotage (70%); Practical Navigation (70%).

The examination for the 'Full' certificate also consists of three parts, written, oral and signalling. The written papers, with the required percentage pass mark, are as follows:

Chartwork and Pilotage (70%); Practical Navigation I and II (70%); Principles of Navigation (Pass/Fail).

Certificate of Competency as Skipper (Limited). 'Limited' certificates are valid within the limits outlined above.

Candidates must be not less than 21 and have served five years at sea (in a deck capacity), of which one year must have been satisfactory service as a Second Hand on board fishing boats of 25 tons gross tonnage and above, whilst holding a Second Hand (Full) or (Limited) Certificate.

The examination is in three parts, written, oral and signalling. The written papers, with the required percentage pass mark, are as follows:

Chartwork and Pilotage (70%); Practical Navigation I and II (70%).

Certificate of Competency as Second Hand (Special).

Candidates must be not less than 21 and have served four years at sea (in a deck capacity), of which at least two years must have been on board fishing boats. The total period of service required may be reduced by up to 12 months by satisfactory attendance at a recognised training establishment (*see below*).

The examination is in three parts, written, oral and signalling. The written papers are Chartwork and Navigation.

Candidates must answer all questions correctly to pass; if, when a candidate hands in his paper, his errors are not too many and the time allowed has not yet expired, the Examiner will return the incorrectly worked problems to him for correction.

RADAR OBSERVER CERTIFICATES

Candidates for Certificates of Competency as Second Hand (Full) and candidates for Certificates of Competency as Skipper (Full) who hold a Certificate of Competency as Skipper (Limited) must have a Certificate of Proficiency as Radar Observer (*see below*).

FIRST AID CERTIFICATES

All candidates for Certificates of Competency as Skipper or Second Hand must have obtained a **Certificate of Proficiency in First Aid** issued by:

St. John's Ambulance Association (10, Grosvenor Crescent, London, S.W.1); St. Andrew's Ambulance Association (98-108, North Street, Glasgow, C.3); British Red Cross Society (14, Grosvenor Crescent, London, S.W.1); the Greater London Council; the Glamorgan County Council; Leith Nautical College; Kingston-upon-Hull local education authority; Grimsby Nautical School

or by another suitable body; or have a certificate issued by a naval medical officer.

TRAINING ASHORE

Candidates for service in the fishing fleet may obtain shore training, which counts towards service at sea, at residential training schools, non-residential technical schools and similar establishments. Candidates may take senior courses in navigation at technical colleges after completing the whole or the larger part of the service required to qualify for examination for a Certificate of Competency as Second Hand (Full, Limited or Special).

Courses are available at the following establishments:

Approved training ships.

H.M.S. *Worcester*; T.S. *Mercury*; T.S. *Dufferin*; T.S. *Arethusa*.

Approved residential schools (qualifying for a maximum remission of 12 months' sea service).

Gordonstoun School (Elgin, Morayshire); The H.M.S. *Conway* Merchant Navy Cadet School (Liverpool, 3); Nautical College (Pangbourne, Berkshire); Indefatigable and National Sea Training School for Boys (Liverpool); Reardon Smith Nautical College (Fairwater, Cardiff); University of Southampton School of Navigation.

Approved cadet courses at technical schools (qualifying for a maximum remission of six months' service).

Robert Gordon's Technical College, Aberdeen; City of Belfast College of Technology; School of Navigation, Bristol Technical College; Dundee Technical College; Fleetwood Navigation School (Fleetwood, Lancashire); University of Strathclyde; Watt Memorial School, Greenock; College of Further Education, Grimsby; High School for Nautical Training, Kingston-upon-Hull; Nautical College, Kingston-upon-Hull; Trinity House Navigation Schools, Kingston-upon-Hull; Leith Nautical College, Edinburgh; Riversdale Technical College, Liverpool; King Edward VII Nautical College, London; London Nautical School; Plymouth College of Technology; Marine and Technical College, South Shields; Lews Castle College (Stornoway, Isle of Lewis).

Approved Senior Courses in navigation (qualifying for a maximum remission of three months' sea service).

Robert Gordon's Technical College, Aberdeen; City of Belfast College of Technology; School of Navigation, Bristol Technical College; Welsh College of Advanced Technology; Dundee Technical College; Fleetwood Navigation School (Fleetwood, Lancashire); University of Strathclyde; Watt Memorial School, Greenock; College of Further Education, Grimsby; Nautical College, Kingston-upon-Hull; Trinity House Navigation Schools, Kingston-upon-Hull; Leith Nautical College, Edinburgh; Liverpool College of Technology; King Edward VII Nautical College, London; Plymouth College of Technology; University of Southampton School of Navigation; Marine and Technical College, South Shields.

SEA PILOTS

Pilots are examined and appointed by numerous pilotage authorities covering various parts of the coasts. The earliest form of pilotage appears to have been provided by guilds of pilots at important maritime centres; in many cases these guilds were later incorporated by Royal Charter under the style of the 'Trinity House' of the port or district. The most important, the 'Guild, Fraternity or Brotherhood of the Most Glorious and Undivided Trinity of St. Clement in the parish of Deptford Strond', received its charter of incorporation from James I.

There are now four general classes of pilotage authorities — Trinity Houses, Harbours Authorities, Municipal Corporations and Pilotage Boards, Trusts and Commissions. The London Pilotage District is quoted below as an example, although requirements for a licence may vary slightly from authority to authority.

Pilotage authorities are empowered to license pilots for their district. They may also grant a certificate to any British subject who is the master or mate of any ship if he applies for it and if, after examination, they are satisfied that he is capable, in respect of skill, experience and local knowledge, of piloting his ship within their district.

The Trinity House Pilotage Service (Pilotage Department, Trinity House, Tower Hill, London, E.C.3) is the licensing authority for the London Pilotage District, which contains about 470 licensed pilots. It is also empowered to grant pilotage certificates to British Masters and Mates who wish to pilot their own companies' ships.

Licensing of Pilots in the London Pilotage District (Pilot's Licence). There are two lists of candidates, the Sea List (Channel, North Channel, Cinque Ports and River Medway Pilots) and the River Thames List (River Thames Pilots). Candidates on either list must be British, not less than 35 and produce evidence of good conduct; they must have Ministry of Transport Certificates of Competency as Masters of Foreign-going Ships, have served for eight years as Master or certificated Watch-keeping Navigating Officer of a ship and have Ministry of Transport Radar Observer's Certificates.

Candidates are selected for vacancies by oral examination conducted by the Elder Brethren of Trinity House. Before final selection candidates are provisionally approved for particular vacancies and must place themselves under the supervision of the Ruler of Pilots at Gravesend or the Superintendent of Pilots for that part of the district for which they are to be licensed. For

between three and six months candidates then accompany licensed pilots and must obtain a certificate from the Ruler or Superintendent that they have occupied this period of probation diligently.

Master's and Mate's Pilotage Licences. Candidates must hold at least a Mate's Certificate of Competency and must satisfy the Elder Brethren of Trinity House as to their knowledge of that part of the London Pilotage District for which they want a pilotage certificate and of the Regulations for the Prevention of Collisions at Sea. Certificates are granted in respect of particular ships, and are not renewable after Masters or Mates have reached the age of 70.

ENGINEER OFFICERS

Senior engineer officers of British foreign-going and home trade passenger ships must hold **Certificates of Competency** awarded or recognised by the Ministry of Transport. Certificates (First and Second Class) are granted as follows:

Steam Certificates qualify the holders to serve as engineers in steamships.

Motor Certificates qualify the holders to serve as engineers in motor ships, i.e. ships propelled by diesel (internal combustion) engines.

Combined Steam and Motor Certificates qualify the holders to serve as engineers in both steam and motor ships.

There is also a higher grade certificate, **Certificate as Extra First Class Engineer**, which is awarded after a voluntary examination intended for officers who wish to prove their superior qualifications and to have certificates of the highest grade granted by the Ministry. The Certificate is a necessary qualification for some governmental and professional appointments.

Second Class Certificates and Endorsements. Candidates for Second Class Certificates must be not less than 21 and must meet certain requirements as to workshop service and sea service. Candidates must have had not less than four years' workshop service as apprentice engineers or journeymen on work suitable for the training of marine engineers in the making or maintenance of machinery, followed by 21 months' sea service on regular watch-keeping duties. At least one year of the workshop service must have been devoted to fitting, erecting or repairing machinery of a suitable size or type in the works or outside; the remaining three years must have been spent on work of this nature or on other suitable work.

The examination is divided into two parts. Part A consists of written papers in Applied Mechanics, Heat and Heat Engines,

Mathematics and Drawing; Part B consists of written papers in Electrotechnology and Elementary Naval Architecture and of two written papers and an oral examination in Engineering Knowledge.

The examination for the endorsement of a Second Class Certificate consists of a written paper in Engineering Knowledge and an oral examination. Candidates for the Motor Endorsement of a Steam Certificate must have completed a further three months' sea service additional to that required for the Certificate held, provided that at least six months' service in all shall have been service on the main propelling machinery of a motor ship. Candidates for the Steam Endorsement of a Motor Certificate must have completed a further six months' sea service additional to that required for the Certificate held, provided that at least nine months' service in all shall have been service on the boilers and main propelling machinery of a steamship.

First Class Certificates and Endorsements. Candidates for First Class Certificates must hold a Second Class Certificate and have completed the same period of sea service as that required for the equivalent Second Class Certificate.

The examination is divided into two parts. Part A consists of written papers in Applied Mechanics and Heat and Heat Engines; Part B consists of written papers in Electrotechnology and Elementary Naval Architecture and of two written papers and an oral examination in Engineering Knowledge. The examination for the endorsement of a First Class Certificate consists of a written paper in Engineering Knowledge and an oral examination.

Exemptions and Remissions. Candidates who have taken certain approved courses of instruction and obtained appropriate certificates may be exempted from Part A of the examination for Second Class Certificates or for both First and Second Class Certificates, provided that the subjects covered by the courses taken are the same as those in the Ministry of Transport's examination syllabus. Candidates for Second Class Certificates may have part of their workshop and sea service remitted in respect of approved examination successes.

Extra First Class Engineer's Certificate. Candidates must hold a First Class combined Steam and Motor Certificate, or a First Class Engineer's Certificate for the one motive power with a First Class endorsement for the other, or a First Class Certificate of Service, but are not required to have performed any additional sea service. The examination covers the syllabuses for the First Class and Second Class examinations and a special syllabus in Engineering Knowledge, the Theory of Machines, the Strength and Properties of Materials, Applied Thermodynamics, Marine Heat

Engines, English, Engineering Drawing and Design, Electrotechnology and Naval Architecture. The examination is divided into two separate parts, A and B, and no exemption from any subject is allowed. The two parts may be taken on separate occasions. Candidates must obtain at least 60% of the total marks throughout the examination for the full Certificate.

TRAINING

The usual method of obtaining the requisite workshop service is apprenticeship to marine engineering works. There are special arrangements for those who have successfully completed a suitable student or technical apprenticeship organised to cover at least four years or a full-time diploma or degree course in Mechanical Engineering. The length of workshop service for full-time students need add up to only two years, including six consecutive months on fitting, erecting or repairing machinery suitable for the training of a marine engineer.

Some shipping companies operate engineer officer training schemes which are accepted by the Ministry of Transport as an alternative to four-year apprenticeships in industrial engineering workshops. Candidates must be at least 16 and have obtained G.C.E. 'O' level (or equivalent) passes in Mathematics, Science and other suitable subjects. The schemes usually consist of a four and a half year course including two years at a technical college on Mechanical Engineering, 18 to 24 months' service at sea as apprentice engineers and 6 to 12 months' vocational practical training in suitable marine or other approved workshops.

Trainees with suitable entry qualifications may take the O.N.C. or O.N.D. in Mechanical Engineering and gain some exemption from the examinations for the Second Class Certificate.

Some further education establishments provide special intensive courses in Marine Engineering theory for candidates who have the necessary workshop and sea experience and wish to reinforce their knowledge before taking either the First or Second Class Certificate. The colleges are as follows:

Robert Gordon's Technical College, Aberdeen; City of Belfast College of Technology; Llandaff College of Technology, Cardiff; Dundee Technical College; Stow College of Engineering, Glasgow; Watt Memorial College, Greenock; College of Technology, Kingston-upon-Hull; Leith Nautical College, Edinburgh; City of Liverpool College of Technology; Poplar Technical College; South Shields Marine and Technical College; Southampton College of Technology.

RADIO OFFICERS

Radio Officers in the Merchant Navy are normally required to be British subjects and to hold a First or Second Class **Certificate of Competency in Radiotelegraphy issued or accepted by the Postmaster-General**. There are three certificates, Special, Second Class and First Class in Radiotelegraphy, and two certificates, Restricted and General in Radiotelephony.

RADIOTELEGRAPHY CERTIFICATES

Special Certificate. The examination for the Special Certificate consists of tests in Morse manipulation, knowledge of the regulations and of marine radio equipment currently in use on ships for which a radiotelegraph installation is not made compulsory by international agreement.

Second Class Certificate. The examination for the Second Class Certificate is in two parts. Part 1 (Theoretical) consists of written papers in Technical Electricity and Radiocommunication. Part 2, which includes a knowledge of the regulations, is practical and manipulative.

First Class Certificate. The examination for the First Class Certificate is also in two parts. Part 1 (Theoretical) consists of written papers in Technical Electricity and Radiocommunication at a higher level than that required for the Second Class Certificate. Part 2, which includes a knowledge of the regulations, is practical and manipulative. Candidates are expected to have a more detailed knowledge and a superior manipulative skill.

RADIOTELEPHONY CERTIFICATES

Restricted Certificate. The examination for the Restricted Certificate consists of practical and oral tests in the operation and adjustment of radiotelephone apparatus.

General Certificate. The examination for the General Certificate also consists of practical and oral tests in the elementary principles of radiotelephony and in a more detailed knowledge of the use of radiotelephone apparatus.

TRAINING

The following establishments have been licensed to use apparatus for the instruction of pupils in the theory and practice of radiotelegraphy and are recognised as suitable centres for the examination of candidates for the Postmaster-General's Certificates of Competence:

Aberdeen Technical College; R.M.S. *Wray Castle* (Ambleside, Westmorland); City of Belfast College of Technology; Marine Radio College, Belfast; Bristol Technical College (School of Navigation); The Wireless College (Colwyn Bay, Denbighshire); South-East Essex Technical College; The Nautical College (Fleetwood, Lancashire); The Glasgow Wireless College; Watt Memorial College, Greenock; Grimsby College of Further Education; College of Technology, Kingston-upon-Hull; Leith Nautical College, Edinburgh; Riversdale Technical College, Liverpool; Merseyside College of Radio, Liverpool; British School of Telegraphy (London, S.W.5); Norwood Technical College; The College of International Marine Radiotelegraphic Communication (Manchester, 16); Newport and Monmouthshire College of Technology; Plymouth College of Technology; Northern Counties Radio School (Preston, Lancashire); Southampton Technical College; South Shields Marine and Technical College.

RADAR

The Ministry of Transport awards Certificates in Radar Observation and Maintenance to officers (and men, in the case of Maintenance Certificates) of the Merchant Navy and fishing fleet.

Radar Observer Certificate. In order to qualify for the issue of a Certificate of Competency as Second Mate (foreign-going), Mate (home trade) or Second Hand (full) a candidate who has passed the examination for Masters and Mates or Skippers and Second Hands must have attended an officially approved Radar Observer course and be able to produce a Ministry of Transport Radar Observer Certificate.

Courses normally last two weeks and are designed to enable officers to obtain a full training in all aspects of the operation and use of marine radar, including the use of radar information for navigation and collision avoidance. Candidates must have completed not less than 24 months' service in the deck department on board ship; this minimum period may be reduced when candidates are entitled to remission of sea service.

Certain colleges also offer radar simulator courses for senior deck officers, leading to the award of a College Certificate. Officers who have completed the course may have their Certificates of Competency suitably endorsed.

The following colleges offer Radar Observer courses; those marked with an asterisk (*) also offer Radar Simulator courses:

Robert Gordon's Technical College, Aberdeen; City of Belfast College of Technology; School of Marine Radio and Radar, Bristol Technical College; Welsh College of Advanced Technology*; The Nautical College (Fleetwood, Lancashire); University of Strathclyde School of Navigation*; College of Further Education, Grimsby; The Nautical College*, Kingston-upon-Hull; Leith Nautical College, Edinburgh; Liverpool College of Technology*; Sir John Cass College, London; Plymouth College of Technology; University of Southampton School of Navigation*; The Marine and Technical College, South Shields*.

Radar Maintenance Certificates are issued to officers and men of the Merchant Navy and the fishing fleet who pass an appropriate examination held by a Ministry of Transport Examiner. The examination may be taken after an approved course of training lasting from 8 to 12 weeks (depending on the student's standard of basic knowledge). Courses are open to students with a basic knowledge of electricity and radio and they give the technical knowledge of marine navigational radar necessary to maintain the equipment and use the appropriate test apparatus. (The South Shields Marine and Technical College has made arrangements for the greater part of the standard course of training to be undertaken by means of an approved correspondence course; the course concludes with four weeks at the college for practical training and examination.)

Courses of instruction are offered at the following establishments:

R.M.S. *Wray Castle* (Ambleside, Westmorland); City of Belfast College of Technology; School of Marine Radio and Radar, Bristol Technical College; South-East Essex College of Technology; Watt Memorial College, Greenock; College of Further Education, Grimsby; College of Technology, Kingston-upon-Hull; Leith Nautical College, Edinburgh; Riversdale Technical College, Liverpool; British School of Telegraphy (London, S.W.5); Norwood Technical College; College of International Marine Radio Communication (Manchester, 16); Plymouth College of Technology; Northern Counties Radio Schools Ltd. (Preston, Lancashire); Southampton College of Technology; The Marine and Technical College, South Shields.

DECK RATINGS' CERTIFICATES

Admission to the Merchant Navy as deck ratings is usually restricted to boys aged between 16 and 17½ who have taken suitable pre-sea training ashore and men over 18 who need not have had

previous sea service on deck in the Merchant Navy and are called Deck Hands (Uncertificated). Boys may be accepted for pre-sea training at the following establishments:

Schools for Deck Ratings

The Indefatigable and National Sea Training School for Boys, Anglesey; Incorporated National Nautical School* (formerly T.S. *Formidable*) (Portishead, near Bristol); National Sea Training Schools at Cardiff (non-residential), Gravesend, Sharpness, Gloucestershire and South Shields (non-residential); Prince of Wales Sea Training School (Dover, Kent); Leith Nautical College (T.S. *Dolphin*, Edinburgh); T.S. *Arethusa* (Rochester, Kent); Lews Castle College (Stornoway, Isle of Lewis).

*Home Office Approved School for Boys.

Colleges and Schools conducting pre-sea training courses for deck ratings

Sir Anthony Deane County Secondary School (Dovercourt, Kent); Falmouth Technical College; College of Further Education, Grimsby; Lowestoft Technical College; Firfield County Secondary Boys' School, Newcastle upon Tyne; Kells Secondary School (Whitehaven, Cumberland).

Attendance at any of these approved establishments may be counted towards the period of sea service required for a **Certificate of Competency as Able Seaman**, without which seamen may not be rated A.B. (Able Seaman) in a ship registered in the United Kingdom. To obtain a Certificate seamen must have served three years at sea on deck, obtained a **Certificate of Efficiency as a Lifeboatman** and have passed an oral and practical examination. The examination may, however, be taken at the age of 18 after a year's service at sea as a deck rating; those who pass may be issued with an **Efficient Deck Hand Certificate**, enabling the holder to serve at sea in a similar capacity to an A.B.

The examinations for these certificates are conducted by the Ministry of Transport.

(A.B.'s may go on to qualify by service for employment as boatswains or in other petty officer ratings.)

SHIP'S COOKS

Certificate of Competency as Ship's Cook. Candidates must pass an examination authorised by the Ministry of Transport at a school offering an approved course of instruction for ships' stewards and cooks. Holders of the Certificate may not be employed in a

ship required to carry a certificated ship's cook until they can prove one month's service at sea in some capacity. Usually men are not released for training or employed as ships' cooks until they have had a year's experience at sea in the galley.

The normal age for admission to the Merchant Navy as junior catering ratings is between 16 and 17½; courses of instruction are given at the following establishments:

Leith Nautical College, Edinburgh; Nautical Catering College, Liverpool; National Sea Training Schools at Gravesend and Sharpness, Gloucestershire.

These courses last eight weeks.

A limited number of men between 20 and 36, who have had at least a year's experience in cooking or baking, may be considered for training as assistant ships' cooks.

The following schools of cookery have been approved by the Ministry of Transport for the purpose of granting Certificates of Competency as Ship's Cook:

Robert Gordon's Technical College, Aberdeen; Grimsby College of Further Education; Leith Nautical College, Edinburgh; Nautical Catering College, Liverpool; London School of Nautical Cookery (London Docks, London, E.1); National Sea Training School of Nautical Cookery at Cardiff, Glasgow, Kingston-upon-Hull and South Shields.

The Certificate may also be granted at Royal Navy, Army and Royal Air Force schools of cookery.

NOTARY PUBLIC

Notaries Public are lawyers who do not deal with court cases. They may undertake conveyancing, but their work is mainly the preparation and attestation of documents required for use overseas and the translation of foreign legal documents into English.

In England no one is entitled to practise as a notary public, or to do any notarial act, unless he has been duly sworn, admitted and enrolled in the Court of Faculties. An applicant for admission, if he intends to practise as a general notary, must previously have been bound by a contract in writing, or by indenture of apprenticeship, to serve as clerk and apprentice to a fully qualified notary in actual practice.

An apprentice, or clerk, who intends to practise as a notary public within the area under the jurisdiction of the Scriveners' Company

(i.e. in the City of London, the liberties of Westminster, the Borough of Southwark, and within a circuit of three miles of the City) must serve for seven years before he is admitted. But if he intends to practise as a general notary outside the three-mile limit he may be admitted and enrolled upon the production of an affidavit of service for five years.

Candidates who come within the jurisdiction of the Scriveners' Company may take its examination in English Law (*see below*) at any time after they have served three years as an apprentice at the Office of the Clerk (79/80, Petty France, London, S.W.1), but the remaining subjects may not be attempted until six years have been served. Since 1961 candidates are required to have G.C.E. (or an approved equivalent examination) passes in at least five subjects at 'O' or 'A' level or two passes at 'A' level. If the candidate's qualifications are the minimum (i.e. five 'O' level passes or four passes at 'O' level and one at 'A' level) one pass must be in English.

The Examinations of the Scriveners' Company, which may, at the discretion of the Examinations Committee, be partly written and partly oral or wholly written, consist of the following subjects:

- I. English Law:** (a) General Principles of the Law of Real Property and Conveyancing; (b) General Principles of the Law of Personal Property; (c) Law of Contracts (including that of partnership); (d) Mercantile Law, particularly in regard to shipping; (e) Company Law; (f) Private International Law.
- II:** One of the following languages: French; Spanish; German; Italian; Portuguese; Dutch; any Scandinavian language; Russian.
- III:** This section covers the work of a Notary Public's office, having particular regard to the law and practice in respect of Inland and Foreign Bills of Exchange; Powers of Attorney and other documents, with special emphasis on form and authentication; the law of the country of the candidate's selected language in relation to notarial practice in that country, especially the law regarding companies and inheritances; other matters of notarial practice including drawing debentures for redemption, oaths and declarations, and notarial copies.

Only candidates successful in all these examinations, who have completed their seven-year apprenticeship, are granted the Freedom of the Worshipful Company of Scriveners and the right to practise as Notaries Public.

NURSERY NURSING

Certificate of the National Nursery Examination Board

(c/o The Royal Society of Health, 90, Buckingham Palace Road, London, S.W.1). The Board's Certificate (revised regulations) is awarded to students who successfully complete a two-year course of training as nursery nurses at training centres approved by the Department of Education and Science and either the Home Office or the Ministry of Health. Students must be not less than 16 when they begin the course. Trainees at nursery training colleges affiliated to the Association of Nursery Training Colleges (90, Buckingham Palace Road, London, S.W.1) who begin a course at an age of not less than 18 may be allowed to take a shorter course (18 months).

The examination consists of two written papers and an assessment throughout training of the student's practical work and of her record of observation of children, which forms an integral part of the training. Reports on a student and the gradings assigned for her work during training are considered by the examiners in making their decision.

The first examinations under the revised regulations will be held in July 1967.

There are also a large number of private colleges which award their own certificates as well as, or instead of, submitting students for the National Nursery Examination Board's qualification.

NURSING AND MIDWIFERY

In England and Wales and Scotland Nursing and Midwifery each have their own controlling body; these are:

The General Nursing Council for England and Wales (23, Portland Place, London, W.1)

The General Nursing Council for Scotland (5, Darnaway Street, Edinburgh, 3)

The Central Midwives Board for England and Wales (59, Harrington Gardens, London, S.W.7)

The Central Midwives Board for Scotland (24, Duke Street, Edinburgh).

But in Northern Ireland the Joint Nursing and Midwives Council

for Northern Ireland (5, Annadale Avenue, Belfast, 7) controls both Nursing and Midwifery.

To qualify as a nurse candidates must take a course in a training hospital and have their names placed either on the Register or on the Roll of Nurses or hold one of three qualifications in specialised branches of nursing (*see below*).

THE REGISTER

The normal entry requirements for courses leading to admission to the Register are at least two G.C.E. or S.C.E. 'O' level passes or C.S.E. Grade 1 passes, including English, but the requirements of the individual training hospitals may be considerably higher. Candidates who have passed Part I of the General Nursing Council's Preliminary Examination at the end of a pre-nursing course (*see below*) or have passed the General Nursing Council's own entrance test may also be accepted for training. They must be at least 18 years old (17½ in Scotland).

(i) ENGLAND

State Registered Nurse (S.R.N.). The course leading to this qualification lasts 3 years. The examinations are Preliminary (Parts I and II) and Final. **Part I** may be taken at the end of an approved course before admission to a training school; or at the end of not less than six months' training after admission to a training school; or together with Part II. **Part II** may be taken at the end of, or at any time after, a year's training, either with Part I or when Part I has been passed.

Part I covers Anatomy and Physiology and personal and communal Hygiene; exemptions from it may be granted in respect of G.C.E. 'O' level passes in Human Anatomy, Human Biology, Physiology and Hygiene. Part II covers first aid, the theory and practice of nursing and an introduction to Psychology.

The Final Examination varies according to the part of the Register to which candidates seek admission. It may be taken any time after the prescribed training period, provided that candidates have already passed the Preliminary examination. The subjects taken in the examination for the General Part of the Register are the theory and practice of nursing (Part 2), Materia Medica and Therapeutics, medical and surgical nursing, Gynaecology and the subjects included in the Nurse's Chart.

Registered Sick Children's Nurse (R.S.C.N.). The 3-year course for this qualification is taken at a children's hospital. It is a course in general nursing for a special age group and follows the same lines as the general S.R.N. course.

Nursing children is also included as part of the S.R.N. course in general hospitals. Because there are now fewer sick children and less opportunities for work in this branch of nursing many students take a 4-year integrated course which leads to the dual qualification of S.R.N. and R.S.C.N.

It is also possible to train for specialised sections of the Register:

Registered Mental Nurse (R.M.N.). This qualification is taken after a 3-year course in a mental hospital or in the psychiatric unit of a general hospital, nursing the mentally sick. From January 1966 the minimum educational entry requirements of the General Nursing Council (*see above*) apply to mental nursing also. The examinations follow the same pattern as for S.R.N., with special study of psychiatric disorders. In some hospitals students spend part of their course in a general hospital gaining wider experience.

Registered Nurse for the Mentally Subnormal (R.N.M.S.). This qualification is also taken after a 3-year course of training. Entry requirements and the form of the course are the same as those for R.M.N. (*above*), although the content of the training is different. The nurse of the mentally subnormal works with children and adults who are long-term patients in psychiatric institutions. His or her work includes supervising craft activities as well as more formal nursing duties and the training course reflects the particular needs of the work.

(ii) SCOTLAND

In Scotland students may be accepted for training at the age of 17½.

Registered General Nurse (R.G.N.) is the Scottish equivalent of the S.R.N. (*see above*).

NORTH LANCASHIRE AND SOUTH WESTMORLAND
HOSPITAL MANAGEMENT COMMITTEE

Nursing Qualifications

Royal Lancaster Infirmary, Lancaster—

3-year course to become a State Registered Nurse

Lancaster Moor Hospital, Lancaster—

3-year course to become a Registered Mental Nurse

Westmorland County Hospital, Kendal }—

Beaumont Hospital, Lancaster }

2-year course to become a State Enrolled Nurse

Write to Matron of the appropriate hospital for more information, giving details of age, sex, education and quoting reference B.Q.

Registered Nurse for Mental Defectives (R.N.M.D.) is the Scottish equivalent of the R.N.M.S. (*see above*).

Registered Fever Nurse (R.F.N.). Training for this section of the Scottish Register normally takes 3 years and follows the same pattern as for S.R.N., although it is taken in an isolation hospital or one which specialises in fever nursing.

(iii) NORTHERN IRELAND

Nursing qualifications are the same as those awarded by the General Nursing Council for England and Wales.

(iv) INTEGRATED COURSES FOR REGISTRATION

In recent years a number of experimental integrated courses have been started to enable students to take more than one qualification after a single course, for example combining training for the Register and for a branch of local authority nursing (i.e. District Nurse, Health Visitor). These courses are usually 4 to 4½ years in length and admission to them is generally restricted to those who have G.C.E. 'A' level passes. The following integrated courses are available:

University of Edinburgh. M.A. or B.Sc. Ordinary or Honours with Nursing Studies (R.G.N.). Candidates take a 5-year course for the Ordinary degree (6 years for Honours) of M.A. or B.Sc. with the Certificate of the General Nursing Council for Scotland (R.G.N.). A year after obtaining R.G.N. candidates may submit a dissertation for the University Diploma in Nursing Studies.

University of Manchester. Diploma in Community Nursing. The 4-year course, which is organised jointly by the University of Manchester and Crumpsall Hospital School of Nursing, leads to Registration (S.R.N.), the Health Visitor's Certificate of the Royal Society of Health and the Diploma in Community Nursing.

Battersea C.A.T. B.Sc. Hons. or Ord. in Human Biology with a Diploma in the Practice of Nursing: 4 years sandwich. S.R.N., Certificate in District Nursing and Health Visitor's Certificate. The 4-year course, which is organised jointly by Hammersmith Hospital, the Queen's Institute of District Nursing and Battersea College of Advanced Technology, incorporates the syllabuses of the General Nursing Council (S.R.N.), the Royal

Society of Health (Health Visitor's Certificate) and the Queen's Institute of District Nursing.

University of Southampton. S.R.N. and Health Visitor's Certificate. The $4\frac{1}{2}$ -year course, which is organised jointly by the University of Southampton and the Nightingale Training School, St. Thomas's Hospital, London, leads to State Registration (S.R.N.) and the Royal Society of Health's Health Visitor's Certificate.

King's College, London, and the Royal College of Nursing. S.R.N. and Health Visitor's Certificate. This is a 4-year course of training.

Chiswick Polytechnic. S.R.N., Certificate in District Nursing and Health Visitor's Certificate. The $3\frac{1}{2}$ -year course, which is organised jointly by Chiswick Polytechnic, London, the Hillingdon and the West Middlesex Hospitals, incorporates the syllabuses of the General Nursing Council (S.R.N.), the Council for the Training of Health Visitors and the Ministry of Health Certificate for District Nurse Training.

THE ROLL

ENGLAND AND WALES, SCOTLAND AND NORTHERN IRELAND

State Enrolled Nurse (S.E.N.) (formerly called State Enrolled Assistant Nurse (S.E.A.N.)). Candidates for this 2-year course of training must be at least 18 ($17\frac{1}{2}$ in Scotland). The emphasis of the course is less on theoretical study than that of the S.R.N. course, although lectures and tutorials are integrated with ward training. The examination takes the form of a test — simpler than the S.R.N. examination—which in England and Wales may be taken after 1 year's or, more usually, 18 months' training, the rest of the course being practical experience. In Scotland the examination is taken towards the end of the 2-year course. The Enrolled Nurse works in most types of hospitals and can go on to train as a District Nurse. In Scotland and Northern Ireland, but not yet in England and Wales, Enrolled Nurses also work in psychiatric hospitals.

OTHER BASIC QUALIFICATIONS IN NURSING

Besides training for the Register and the Roll, independent qualifications are conferred in three specialist branches of Nursing. These are:

Ophthalmic Nursing Diploma of the Ophthalmic Nursing Board. Students may enter ophthalmic nursing, which involves the care of patients awaiting or recovering from eye operations, at the age of 17. The examinations of the Ophthalmic Nursing

Board (Moorfields Eye Hospital, City Road, London, E.C.1) are taken during a 3-year course, which includes general nursing practice. The Diploma is awarded on successful completion of the course.

Orthopaedic Nursing Certificate of the Joint Examination Board of the British Orthopaedic Association (45, Lincoln's Inn Fields, London, W.C.2). Candidates may start training for this Certificate at 17 and may combine it either with general nursing training or with training in Physiotherapy. Orthopaedics is concerned with the treatment of bone deformities in children and adults and much of the work is helping patients to recover the use of limbs. The final examination of the Board is taken during the 3-year training course and the Certificate is granted when the general nursing or Physiotherapy training is completed.

Thoracic Nursing Certificate of the British Tuberculosis Association (59, Portland Place, London, W.1). The Certificate is taken after a 2-year course at a chest hospital. Candidates may enter the course at 17½. Holders of the Certificate are eligible, without any further qualifications, for posts as Tuberculosis Association Staff Nurses in any chest hospital.

It is possible to take a 3-year course combining this training and the training for S.E.N., or a 3-year 9-month course to combine the Certificate with S.R.N.

MIDWIFERY

State Certified Midwife (S.C.M.). Courses for Midwifery are available at hospitals recognised for training by the Central Midwives Boards (C.M.B.) and lead to admission to the Roll of Midwives. The profession is not open to men. Most midwives start their training after completing a general nursing course, but it is possible to train in midwifery with no previous nursing experience or training. Courses vary in length:

- (i) 2 years for women with no previous nursing training. Candidates must be at least 20 and have reached a good standard of education.
- (ii) 18 months for a Registered Mental Nurse, Registered Nurse for the Mentally Subnormal, State Enrolled Nurse or nurses trained in the Orthopaedic or Thoracic fields.
- (iii) 12 months for a State Registered Nurse or Registered Sick Children's Nurse. The course may be reduced to 10 months if the general nursing course taken by candidates included 3 months' approved obstetric training.

The examination is taken in two parts. Part I, theoretical, both

written and oral, is taken after the first period of training, which varies in length from 4 months (6 months in Scotland) to 18 months according to the needs of the pupil. It includes lectures and classes and attendance at births. The pupil delivers at least 10 babies.

The second period of training lasts 6 months, three of which are spent in hospitals and three in domiciliary midwifery, assisting a district midwife. Part II is taken at the end of this period and consists of oral tests, and practical and clinical examinations.

POST-REGISTRATION QUALIFICATIONS

(i) GENERAL

National Certificate in District Nursing. The 4-month courses for this qualification (reduced to 3 months in some cases) are open to registered nurses. Courses are run by the Queen's Institute of District Nursing (57, Lower Belgrave Street, London, S.W.1), local health authorities and, in some parts of London, by the Ranyard Nurses (St. Mark's Church, Kennington Park Road, London, S.E.11). A 1-year course for District Nurses is run by the Royal College of Nursing (1a, Henrietta Place, Cavendish Square, London, W.1).

Health Visitor's Certificate. This Certificate is awarded by the Royal Society of Health (90, Buckingham Palace Road, London, S.W.1) and by the Royal Sanitary Association (in Scotland) to qualified nurses who complete a 1-year full-time post-registration course of training. Courses are organised by local authorities, professional bodies, including the Royal College of Nursing, technical colleges and universities. They are approved in England and Wales by the Ministry of Health and the Royal Society of Health and in Scotland by the Scottish Home and Health Department and the Royal Sanitary Association of Scotland.

Entry to these courses is restricted to nurses who are on the general part of the Register with obstetric training or with a Part I Certificate of the Central Midwives Boards.

The Royal Society of Health also awards a similar **Certificate for Health Visitors and School Nurses** training for this work outside England and Wales.

Midwife Teacher's Diploma of the Central Midwives Board. A full-time 6-month residential course at the Midwife Teachers' Training College (Kingston Hall, Surrey) or part-time courses lasting about 15 months and organised by the Royal College of Midwives (16, Mansfield Street, London, W.1) lead to this qualification. Entry to courses is restricted to qualified midwives with

considerable practical experience. The Diploma is an essential qualification for a midwifery tutor and desirable for senior administrative posts.

(ii) DIPLOMAS AND CERTIFICATES OF THE UNIVERSITY OF EDINBURGH

Diploma in Medical Services Administration (D.M.S.A.). Graduate nurses (that is, those who have taken the M.A. or B.Sc. degree and R.G.N. course of the University of Edinburgh or graduates of other universities who are also Registered Nurses) may take a 1-year full-time course at the Usher Institute leading to the Diploma in Medical Services Administration. The course covers administration, organisation and management, medical and social care, Statistics, Sociology, Psychology and health education.

Certificate in Nursing Studies (Advanced Nursing Education for Nurse Tutors). A 2-year course open to Registered General Nurses with approved experience. Candidates must submit a dissertation on an approved subject and pass examinations at the end of each year.

Certificate in Nursing Studies (Administration). A 1-year course open to experienced Registered General Nurses. The course covers nursing administration, social medicine and science as applied to nursing and a subject of the candidate's choice from the Faculties of Art or Social Sciences. Candidates are required to submit a dissertation as well as to take a written examination.

Certificate in Nursing Studies (General). A 1-year course open to experienced Registered General Nurses. In some specialist fields candidates do an extra 3 months' practical work. Candidates choose one subject from the Faculties of Arts or Social Sciences and take at least two full courses from among those specified for the 2-year Certificate course. The examination takes the same form as that for the Certificate in Administration.

Diploma in Nursing Studies (Education). The regulations for the 2-year course are the same as those for the Certificate in Advanced Nursing Education (*see above*), except that the subject of the dissertation must also be approved by the University Department of Education.

Diploma in Nursing Studies (Administration) (International School). The Diploma is open to any student who is a graduate of an approved university and who has obtained the Certificate in Nursing Studies (Administration) (*see above*) and who submits an approved dissertation.

The Diploma in Nursing Studies (General) is open to any student who is a graduate of an approved university and who has

obtained the Certificate in Nursing Studies (General) (*see above*) and who submits an approved dissertation.

(iii) AWARDS OF THE UNIVERSITY OF LEEDS

The Diploma in Nursing is taken by S.R.N.'s after 4 years' practical experience. The course is 1 year part-time and covers medico-social legislation and administration, Hygiene and communicable diseases and human relationships in nursing practice and management.

The Nurse-Teacher's Certificate is taken after a 1-year course by S.R.N.'s who have had 3 years' hospital service and 1 year as a ward sister. Part 2 of the examination covers Pathology, Bacteriology, Hygiene and communicable diseases, principles of education, methods of teaching and Educational Psychology, nursing school administration and practical teaching.

(iv) DIPLOMAS OF LONDON UNIVERSITY

Diploma in Nursing. Study for this external Diploma is undertaken partly at technical college and partly with the aid of lectures arranged by the Royal College of Nursing. It is an additional qualification taken by Registered Nurses after 2 years' study. Part A of the examination covers general nursing subjects; Part B a specialist branch of the candidate's own choice from among Medical, Surgical, Obstetric, Paediatric, Psychiatric, Domiciliary, Occupational Health or Public Health Nursing.

Sister-Tutor's Diploma. Candidates for the 2-year full-time courses leading to the Diploma must be Registered Nurses with wide experience. This qualification is necessary for tutors in nurse training schools. Courses for the Diploma are organised by Battersea College of Advanced Technology, Queen Elizabeth College (University of London) and the Royal College of Nursing. The examination covers the causation, nature and prevention of diseases and education (including practical teaching).

(v) CERTIFICATES AWARDED BY THE ROYAL COLLEGE OF NURSING AND THE NATIONAL COUNCIL OF NURSES IN THE UNITED KINGDOM: 1a, Henrietta Place, London, W.1.

The Royal College of Nursing prepares experienced State Registered Nurses for senior positions in hospitals and public health, working in co-operation with schools of nursing and universities. The College's Royal Charter acknowledges it as an examining and certifying body.

The College arranges full-time courses for nurses who wish to become ward sisters, health visitors or occupational health nurses or to take up posts in administration and teaching. A course is organised for school-leavers, combining Health Visitor training with general nurse training, in conjunction with King's College, London (*see above*, page 881).

The College awards the following Certificates:

Ward Sister's Certificate. Candidates must have held a post as Staff Nurse for at least a year since registering on the General, Mental or Sick Children's Register. The syllabus covers the following subjects:

Contemporary social background; Psychology in relation to ward administration and ward teaching; ward administration; diet in disease; Applied Physiology; developments in nursing since 1860; ward teaching practice; class talks practice; examining practice; and practical work.

The course lasts 3 months and leads to a written examination in ward administration and Psychology in relation to ward administration and ward teaching.

Clinical Instructors' and Teachers of Pupil Nurses' Certificate. Candidates must have had not less than 3 years' experience since registration, of which two should have been spent as a ward or departmental sister, or one as a ward sister and one as a night sister. The course lasts 6 months and leads to a written examination in the following subjects:

Normal and disordered body function (and oral examination); Educational Psychology (and oral examination); ward teaching.

Candidates prepare a thesis, which is taken into account in the final results.

The Occupational Health Nursing Certificate is awarded after a 6-month course open to registered nurses, aged at least 24, who are experienced in casualty, out-patient or public health work and in eye or skin work and who wish to work in factories or other establishments. The course includes 10 weeks' practical work and leads to a written examination in the following subjects:

The modern industrial system and social services; the health of the industrial worker (and oral examination); the work of the nurse in industry (and oral examination).

Certificate in Nursing Administration (Hospital). Candidates must have had 5 years' post-registration experience in hospital, preferably including some administration in addition to ward sisters' and night sisters' posts, and should normally have 5 G.C.E. 'O' level passes or the equivalent. The course lasts 1 year,

including 8 weeks' practical work, and leads to a written examination in the following subjects:

Hospital administration (and oral examination); administration of the nursing service (and oral); Nutrition and Catering (and oral); general Psychology, ethical principles and practical problems (and oral); growth of the nursing school.

Candidates prepare a thesis which, together with the report on their practical work, is taken into account in the final results.

Certificate in Nursing Administration (Public Health) or (Occupational Health). Candidates must have the Health Visitor Certificate of the Royal Society of Health and must have held a public health appointment for at least 5 years or the Occupational Health Nursing Certificate of the Royal College of Nursing and have not less than 3 years' experience in occupational health nursing, at least one of which must have been after obtaining the Occupational Health Nursing Certificate. Candidates should normally have 5 G.C.E. 'O' level passes or the equivalent.

The course, which includes practical work, lasts 1 year and leads to examinations in the following subjects:

Public Health and public health nursing (and oral examination); Social History and the growth of Public Health Nursing; Personnel Management and Public Health Nursing supervision (and oral); Psychology and Ethics (and oral).

Candidates are required to present a dissertation on an aspect of their practical work.

Health Visitor Tutor's Certificate. Candidates must hold the Health Visitor Certificate and have not less than 3 years' full-time health visitor experience; they should normally have 5 G.C.E. 'O' level passes or the equivalent. The course of training, which is conducted in co-operation with the City of Birmingham, lasts 1 year.

District Nurse Tutor's Certificate. Candidates must have an approved District Nurse Certificate, be State-certified Midwives and have a post as a district nurse for at least 3 years after qualifying. The course of training lasts 1 year. Candidates should have 5 G.C.E. 'O' level passes or the equivalent.

Occupational Health Nurse Tutor's Certificate. The entry requirements are the same as those for the Certificate in Nursing Administration (Occupational Health) (*see above*). The course of training, which includes practical work, leads to a written examination, including the practice of education, the training of public health students and a practical teaching class.

NUTRITION AND FOOD SCIENCE

(For Dietetics see separate Section)

UNIVERSITY DEGREES AND DIPLOMA

(i) FIRST DEGREES

The following degree courses are offered, with the course durations and entry requirements shown. For details of higher and other degrees refer to the entries under individual universities in Part 4.

Belfast. B.Sc. in Applied Science (Specialisation in Food Science) (Hons. or Ord.): 4 years. 2 'A' level G.C.E. passes in Physics and Chemistry. 'O' level G.C.E. Mathematics must also be offered.

London (Queen Elizabeth College). B.Sc. (Nutrition): 3 years. 2 'A' level G.C.E. passes in Chemistry and either Physics or Biology or Zoology. A pass in Mathematics at 'O' or 'A' level must also be offered.

Leeds. B.Sc. in Food Science: 4 years (Honours) or 3 years (Ordinary). G.C.E. 'A' level passes in Physics, Chemistry and Pure and Applied Mathematics, or Pure Mathematics, or Pure Mathematics with Statistics or Mathematics for Science, or (the following subjects less desirable) Botany, or Biology or Zoology.

Nottingham. B.Sc. Hons. in Food Science: 3 years. 3 'A' level G.C.E. passes. Chemistry at 'A' level is required and the other 2 passes should be preferably in Botany and Zoology, although 'A' level passes in Biology and Physics can be accepted instead, or 'A' level passes in one biological subject and one from Physics, Mathematics, Geology and Geography. 4-year course: 2 'A' level G.C.E. passes. Mathematics and Chemistry must be passed at 'O' level if not offered at 'A' level passes.

Reading. B.Sc. in Food Science: 3 or 4 years. 2 'A' level G.C.E. subjects, preferably from Pure and Applied Mathematics (or another approved mathematical subject), Physics, Chemistry, Botany, Zoology and Biology. (For total exemption from the Intermediate examination 'A' level G.C.E. passes in Chemistry and 2 subjects from Physics, Botany, Zoology, Biology and Mathematics must be offered.)

Strathclyde. B.Sc. in Food Science: 4 years. At least 2 'A' level G.C.E. passes and 4 'O' level passes (or the equivalent). These must include English Language and a foreign language. A pass in Mathematics at 'A' level is normally required for science courses. Candidates with good 'A' level Mathematics may secure exemption from part or all of the first year course. (This course formerly led to the award of the Associateship of the Royal College

of Science and Technology, Glasgow (A.R.C.S.T.). The course, offered until 1964, was of degree standard.)

(ii) **UNIVERSITY DIPLOMA**

University of London (Queen Elizabeth College): Diploma in Nutrition. 1-year course.

DIP.TECH. AND DEGREE OF THE C.N.A.A.

A 4-year sandwich course leading to **Diploma in Technology in Food Technology** was offered by the National College of Food Technology (St. George's Avenue, Weybridge, Surrey). The course was open to school-leavers and to students sponsored by industry and was intended to lead to senior posts in production, applied research, design and development and technical management. During the first 3 years of the course students spent alternate periods in college and in industry. This course now leads to the **B.Sc. degree of the C.N.A.A.**

The entry requirements are either: (i) G.C.E. 'A' level passes in 2 science subjects one of which must be Chemistry or Physics, and 'O' level passes in at least 3 subjects which must include English Language, Mathematics and a science subject. Chemistry or Physics, if not passed at 'A' level, must have been studied to that level. Or (ii) a pass in the O.N.C. examination in either Chemistry or Physics with an average mark of not less than 65%.

HIGHER NATIONAL DIPLOMA

Courses leading to the **H.N.D. in Chemistry (Food Technology)** are offered by Grimsby College of Further Education (3-year sandwich course) and Borough Polytechnic (2-year full-time course). Candidates for these courses should normally have passed 'A' level G.C.E. in Chemistry and 'O' level in three other subjects, or have obtained a good Ordinary National Certificate or Diploma.

COLLEGE DIPLOMAS

National College of Food Technology. Postgraduate Diplomas are awarded in the following subjects:

- Food Technology
- Food Microbiology
- Food Quality Control

The courses of study are available to students who hold a suitable science degree of a recognised university or an equivalent qualification.

A Postgraduate Research Diploma is awarded by the National College of Food Technology to students who complete 2 years' research work on an approved subject and submit a satisfactory thesis on their work at the end of that time.

Borough Polytechnic, London. College Associateship in Food Science.

CITY AND GUILDS OF LONDON INSTITUTE CERTIFICATES

These Certificates are awarded in specific branches of food technology, for example Flour Milling and Milk Pasteurisation and Distribution. These are covered in the relevant sections.

OTHER QUALIFICATIONS

Certificate in Nutrition of the Hotel and Catering Institute. This examination covers practical aspects of nutrition for catering workers.

Examination in Nutrition in Relation to Catering and Cooking of The Royal Society of Health. This examination is intended for food supervisors, managers and others in hospitals, canteens, school kitchens, hotels and restaurants who wish to improve their knowledge of the science of Nutrition. The examination covers principles of nutrition and their application to large-scale cookery. Candidates must have attended at least 120 hours' instruction full-time or part-time, in one year.

These courses do not qualify a candidate for work as a dietitian. The following colleges offer courses leading to the examination:

Hotel and Catering School, Woodlands Avenue, Acton,
London, W.3

Technical College, Lower Borough Walls, Bath

College of Food and Domestic Arts, Oozells Street, Birmingham, 1

Technical College, Palatine Road, Blackpool

College of Technology, 3, Great George Street, Bristol, 1

North Gloucestershire Technical College, Cheltenham

Glasgow and West of Scotland College of Domestic Science,
Glasgow, C.3

County Technical College, Stoke Park, Guildford

College of Crafts and Catering, Colquitt Street, Liverpool, 1

Borough Polytechnic, London, S.E.1

Northern Polytechnic, Holloway Road, London, N.7

South-East London Technical College, Lewisham Way,
London, S.E.4

Domestic and Trades College, 289, Wilmslow Road,
Manchester, 14

College of Technology, St. George Avenue, Northampton

College of Technology, Pond Street, Sheffield, 1.

OCCUPATIONAL THERAPY

See note on State Registration, page 790.

The Association of Occupational Therapists

251, Brompton Road, London, S.W.3

Member (M.A.O.T.). The examinations for this qualification are taken after a 3 to 3½ year full-time course. They are taken in at least two stages, and candidates take papers in the following groups of subjects:

Group I: Anatomy and Physiology, Psychology of Personality and Human Relations.

Group II: Medicine, Surgery, Psychiatry.

Group III: Choice from a variety of Occupational Techniques.

Group IV: Occupational Therapy applied to Mental and Nervous Illness, Physical Disabilities, and Social and Industrial Resettlement.

Practical examinations in teaching techniques and a viva voce are also given.

For entry to a course leading to this qualification a student must be at least 18 years old and have obtained at least 5 'O' level G.C.E. passes. Preference may be given to candidates with 'A' level passes.

Older candidates who have studied or had experience of subjects which may be useful in Occupational Therapy may be accepted without these educational qualifications.

The following training schools offer courses leading to M.A.O.T.:

The Occupational Therapy Centre, 14, Merton Rise, London, N.W.3; Botley's Park Hospital, Chertsey, Surrey; School of Occupational Therapy, Highfield, 403, Burton Road, Derby; St. Loyes School of Occupational Therapy, Millbrook House, Millbrook Lane, Topsham Road, Exeter; Liverpool School of Occupational Therapy, Victoria Road, Huyton, near Liverpool; School of Occupational Therapy, St. Andrew's Hospital, Northampton; The Dorset House School of Occupational Therapy,

The Churchill Hospital, Oxford; York School of Occupational Therapy, The Military Hospital, York.

Teacher's Diploma (T.M.A.O.T.). The examination for this diploma may be taken by qualified occupational therapists after further part-time study.

The Scottish Association of Occupational Therapists

77, George Street, Edinburgh, 2

Member (M.S.A.O.T.). Until October 1965 Membership was open to those candidates who took a 3-year full-time course of training leading to the **Diploma in Occupational Therapy of the Astley Ainslie, Edenhall and Associated Hospitals Board of Management.**

From 1965 the necessary qualification for entry to membership is the **Diploma of the Scottish Association of Occupational Therapists.**

The examinations for this diploma are taken after a 3-year course.

Entry requirements are S.C.E. Ordinary Grade passes or G.C.E. 'O' level passes in 5 subjects including English. Preference is given to candidates with passes at 'A' level.

The examination for the diploma is taken in three parts: the First Professional examination includes papers on Anatomy and Physiology and Psychology, and a practical examination; the Second has papers on Psychiatry, Medicine and Surgery; and the Third papers on Occupational Therapy applied to physical and psychiatric disorders and on administration.

Courses for the diploma are offered at:

Astley Ainslie Hospital, Grange Loan, Edinburgh, 9;
Glasgow School of Occupational Therapy, 29, Sherbrooke Avenue, Glasgow, S.1.

OCEANOGRAPHY

UNIVERSITY DEGREE IN OCEANOGRAPHY

Liverpool. B.Sc.: 3 or 4 years. 3 'A' levels including Physics required.

Wales (Bangor). B.Sc. in Zoology with Oceanography: 3 years. 3 'A' levels in science subjects.

OIL AND COLOUR (PAINT) TECHNOLOGY

The Oil and Colour Chemists' Association
Wax Chandlers Hall, Gresham Street, London, E.C.2

The Association does not conduct its own examinations.

Ordinary Membership is open to (i) graduates in a scientific subject or holders of an equivalent qualification, (ii) holders of approved relevant technological qualifications (e.g. C.G.L.I. Advanced Examination in Paint Technology or Printing Ink Technician's Advanced Certificate) and (iii) holders of the H.N.C. in Chemistry. Candidates who provide adequate evidence of technical competence but do not possess the above qualifications may obtain Ordinary Membership after a qualifying period of industrial experience of at least seven years.

Honorary Membership is awarded as a mark of eminence in scientific or industrial achievement.

Associate Members are persons connected with or otherwise interested in the work of the Association but are not eligible for Ordinary Membership.

Junior Members are normally less than 25 years of age and are engaged in the industries and are concerned with a course of technical study.

DIP.TECH., DEGREES OF THE C.N.A.A.

Courses for the Dip.Tech. with specialisation either wholly or partly in paints and surface coatings were available at Borough Polytechnic, Birmingham College of Advanced Technology and Rutherford College of Technology, Newcastle. The courses at Borough Polytechnic and Rutherford College will now lead to the B.Sc. degree of the C.N.A.A. The Birmingham College course will lead to the **B.Sc. in Chemistry** of the new university.

CITY AND GUILDS OF LONDON INSTITUTE EXAMINATIONS

The C.G.L.I. conducts examinations for Operators/Paint Technologist's Certificates (Subject No. 9): Intermediate, Advanced and Full Technological Certificates are awarded. The Certificates are for Operatives, Paint Technologists (Intermediate and Advanced). The F.T.C. is awarded in five areas of study.

OTHER QUALIFICATIONS

Royal Institute of Chemistry — Licentiatehip. The L.R.I.C. is awarded to candidates with an approved H.N.C. with an endorsement in Surface Coatings Technology.

OPHTHALMIC OPTICS

QUALIFYING DIPLOMAS

To practise as an ophthalmic optician the qualifying diploma of one of the following bodies is required:

The Worshipful Company of Spectacle Makers, Apothecaries Hall, Blackfriars Lane, London, E.C.4.

The British Optical Association, 65, Brook Street, London, W.1.

The Scottish Association of Opticians, 116, West Regent Street, Glasgow, C.2.

The Institute of Optical Science (incorporating the Institute of Chemist Opticians), 23, Southampton Place, London, W.C.2.

These diplomas are taken after a three-year course of full-time study, or after five years' part-time study or four years' part-time followed by one year's full-time study. A final year of clinical experience is necessary before registration.

Minimum entry requirements to the courses leading to the following qualifications are either:

(i) G.C.E. 'A' level passes in two subjects including Physics and Mathematics or Chemistry or Biology or Zoology, and three 'O' level passes including English.

(ii) S.C.E. Higher Grade passes in two subjects and Ordinary Grade passes in three subjects.

The Ophthalmic Diploma of the Worshipful Company of Spectacle Makers (F.S.M.C.). The examination for this Diploma is taken in two stages (taken after two years' full-time study or after longer part-time study). Part I of the examination covers Geometrical, Physical and Technical Optics, ophthalmic lenses and frames, Visual Optics and ophthalmic instruments, Anatomy and Physiology of the eye and Physiology of vision, and ophthalmic practice. Part II includes three papers on ophthalmic practice, the recognition of ocular abnormality and optical dispensing.

Candidates for this Diploma must be British subjects as the

qualification carries with it the Freedom of the Company, and Freemen are entitled to claim freedom of the City of London.

Fellow of the British Optical Association (F.B.O.A.). The Professional examination is taken in three parts. Part I, taken at the end of the first year, covers Mathematics, Chemistry, elements of general Anatomy and Physiology, Physical and Mechanical Optics. Taken with, or before, Part I is a pre-professional examination in Mathematics and Chemistry from which exemption may be gained for 'A' level passes in these subjects.

The Intermediate examination, taken at the end of the second year, covers Anatomy and Physiological Optics, Optics and ophthalmic instruments, subjective and objective methods of measuring errors of refraction. The subjects of the Final examination are anomalies of binocular vision, pathological ocular conditions, industrial Ophthalmic Optics, Forensic Optics, drugs and a complete clinical examination of the eye.

Candidates who have passed the qualifying examination are admitted to fellowship of the Association when they reach the age of 21.

Qualifying Ophthalmic Diploma of the Scottish Association of Opticians (F.S.A.O.). The examinations for this Diploma are taken in two stages. Part I, taken at the end of the second year of the three-year course, covers Mathematics, Physics, Chemistry, Geometrical and Physical Optics (written and practical), General and Mechanical Optics (written and practical), General and Ocular Anatomy and Physiology, Visual Optics and ophthalmic instruments, Physiology and Psychology of vision and Ophthalmoscopy. The final examination, taken at the end of the course, has as its subjects binocular functions and Orthoptics (written and practical), Retinoscopy and Ophthalmoscopy (oral and practical), examinations of the eye, advanced dispensing (oral, practical and written), sub-normal vision aids, recognition of abnormality, Law, drugs, contact lenses and Industrial Optics and illumination.

Diploma in Ophthalmics of the Institute of Optical Science (D.Opt.). The examination for this Diploma requires a three-year course covering the following sections: (1) Optics; (2) Anatomy and Physiology; (3) Ophthalmic practice; (4) Dispensing; (5) the recognition of ocular abnormality.

An examination in Optics is held not less than one year and not more than two years after the beginning of the course; examinations in Anatomy, Physiology and ophthalmic practice are held before going on to the final year; and a final examination covering the whole course is held at the end of the third year. Special emphasis is placed on practical training.

COURSES

Recognised training courses leading to Ophthalmic Diplomas are offered at the following:

Northampton College of Advanced Technology, St. John Street, London, E.C.1 (proposed B.Sc. degree); Bradford Institute of Technology, Bradford (proposed Ordinary degree); College of Advanced Technology, Birmingham (proposed B.Sc. Hons. degree); Welsh College of Advanced Technology, Cardiff (proposed Hons. and Pass degrees B.Sc.); Stow College, 43, Shamrock Street, Glasgow, C.4; Glasgow Refraction Hospital, 8, Clairmont Gardens, Glasgow, C.3; London Refraction Hospital, 58-60, Newington Causeway, London, S.E.1. (The last two give clinical training and experience only.)

Normally these courses lead to the Diploma of the College and also to one of the professional examinations described above. Degree courses in Ophthalmic Optics will be available when University Charters are granted to the individual colleges.

ADVANCED PROFESSIONAL QUALIFICATIONS

The Higher Diploma of the Worshipful Company of Spectacle Makers (S.M.H.D.). The examination for the Higher Diploma is open to all Diploma holders of the Company; it is based on the Company's Diploma examination, but is of a higher standard. Two written papers form the examination, selected from the three general groups (1) Optics; (2) Anatomy and Physiology of the eye and Physiology of vision and (3) ophthalmic practice. An essay written before the examination and viva voce tests are also used in assessing candidates.

The Senior Award of the Worshipful Company of Spectacle Makers (S.M.S.A.). Registration for the Senior Award is open to Diploma holders of the Company and, in some cases, to holders of recognised equivalent Diplomas. To qualify for an award the candidate must submit either a dissertation in the form of a critical survey of existing knowledge on an optical subject or a thesis embodying the results of his own original research.

Fellow of the British Optical Association with Honours (F.B.O.A. Hons.). This is now superseded by **Fellow of the British Optical Association, Higher Diploma (F.B.O.A., H.D.).** This qualification is obtained by taking a further examination of higher standard than the Fellowship. Its standard is recognised as degree equivalent. The examination has three parts: an advanced examination; a special subject from the following

list: contact lenses, Applied Optics and Industrial Optics, and a thesis.

Diploma in Orthoptics of the British Optical Association (D.Orth.). The examination for this qualification may be taken by Members of the B.O.A. and by holders of any recognised qualification in Refraction or Optometry.

Diploma in Contact Lens Prescribing and Fitting of the British Optical Association (D.C.L.P.). The examinations for this diploma may also be taken by Members of the B.O.A. and by holders of other recognised qualifications on Refraction or Optometry. There are two examinations, the Advanced and the Supplementary, which cover all aspects of theory and clinical practice.

The Contact Lens Certificate of the Scottish Association of Opticians is awarded to qualified ophthalmic opticians who, having taken a two-year part-time course of at least 120 hours, pass the Association's examinations in Ocular Anatomy and Physiology (written and oral), Physiological Optics (written), clinical practice (written, practical and oral) and drugs (practical and oral).

UNIVERSITY DEGREES AND DIPLOMA

(i) FIRST DEGREES

In addition to the proposed degree courses at Northampton C.A.T., Bradford Institute of Technology, Birmingham C.A.T. and the Welsh C.A.T. the Faculty of Technology of the University of Manchester offers a first degree course in Ophthalmic Optics:

Manchester. B.Sc. Ord. Ophthalmic Optics: 3 years. Entry requirements as for Diploma in Ophthalmic Optics described above.

(ii) HIGHER DEGREE

Manchester. M.Sc.: This degree is granted at the end of a research course in Optics; it is awarded on the evidence of an examination and a dissertation.

(iii) UNIVERSITY DIPLOMA

Diploma in Optics of Imperial College, London (D.I.C.). A 3-year research course in Optics. The course is postgraduate; the Higher Diploma of the British Optical Association (*see above*) is also accepted as an entrance qualification.

OPTICIANS (DISPENSING)

Association of Dispensing Opticians

22, Nottingham Place, London, W.1

Fellowship (F.A.D.O.). This qualification can be taken after:

- (i) A two-year full-time course, with a year of approved clinical experience following the Final examination.
- (ii) Four years' employment experience supplemented by part-time classes at a technical college or by a correspondence course.
- (iii) A one-year full-time course in theoretical Optics at a training institution, followed by a year of practical work on six half-days each week at the School of Optical Dispensing of the Guild of Dispensing Opticians, the rest of the week being spent in employment. The Final examination may be taken after these two years and the Diploma awarded after a further year's practical experience.
- (iv) A four-year apprenticeship scheme prepared by the Guild of Dispensing Opticians. The first two years are spent in the workshops of a manufacturing dispensing optician learning grinding, frame-making and repairing; the second two years in a dispensing optician's showroom learning to fit spectacle frames and interpret prescriptions.

The Fellowship Examination. The minimum entry requirements are 'O' level G.C.E. (Grade I C.S.E. passes will be accepted instead) in Mathematics and either English or Physics. Candidates must be at least 17 years old.

The examination for the Fellowship is in two parts — Preliminary and Final Dispensing examinations. Both parts have practical and theoretical sections and the subjects include light, prisms and lenses, Ocular Anatomy and Physiology, optical principles, practical work on lenses and frames including fitting.

OTHER AWARDS

Diploma of Honours Fellowship (F.A.D.O. (Hons.)). This Diploma is granted to students who pass the Final Dispensing examination of the Association and also pass an examination in one of the following subjects: Contact lens fitting, the Geometric Optics of ophthalmic lenses or ophthalmological instruments (*see below*). Those who obtain the Fellowship Diploma and the Diploma in Contact Lens Fitting are entitled to style themselves 'F.A.D.O. (Hons.) C.L. Tech.'

Diploma in Contact Lens Fitting (C.L. Tech. (A.D.O.)).

The examination for this Diploma, in addition to being one of the extra papers for the Honours Fellowship Diploma, can be taken by non-members of the Association as well as by members who have not yet reached the Fellowship examination stage.

Candidates must be at least 21 years old and, normally, should hold the qualifying diploma of a recognised optical body. The examination is theoretical and practical; it covers Anatomy, Pathology of the eye and the adnexa, Physiology, Optics, indications for use of contact lenses, visual examination and clinical procedure. It is followed by a year's probation before the Diploma is awarded.

Diploma in Geometric Optics of Ophthalmic Lenses.

The examination for this Diploma is open only to those who have passed the Final Theoretical Dispensing examination of the Association. If the student has passed the Full Final Dispensing examination the addition of this Diploma qualifies him for the Diploma of Honours Fellowship of the Association.

The examination covers Optical Principles and the study of various types of complex lenses.

Diploma in Ophthalmological Instruments. In addition to being one of the extra papers for the Honours Fellowship Diploma, the examination for this Diploma may be taken by candidates of at least 21 who have had a minimum of three years' practical experience in approved employment—in the manufacture, design or sale of ophthalmological instruments. The examination takes the form of practical and oral tests and two written papers—advanced optical principles and ophthalmological instruments.

Diploma in Artificial Eye Fitting. This Diploma does not qualify a student for Honours Fellowship. The examination can be taken by candidates of at least 21 who have had at least one year's experience of artificial eye fitting or who have taken a training course recognised by the Association. The examination consists of two hours theoretical and three hours practical tests, the practical including orbital examination and mould-making.

Craft Diplomas. These qualifications are granted to candidates, normally employees in optical manufacturing firms, successful in the Association's Final Craft examination. Examinations are held in the following sections: Edging, Frame Bending, Frame Making (gold, shell, imitation shell and metal), Prescription Checking, Surfacing.

OTHER BASIC QUALIFICATIONS**Dispensing Certificate of the Worshipful Company of**

Spectacle Makers (Apothecaries Hall, Blackfriars Lane, London, E.C.4) (**S.M.C.(Disp.)**). The training course for this certificate may be either full-time or a part-time day course over a period of two years; it may also be a three-year course of evening classes.

The minimum entry requirements are G.C.E. 'O' level passes (or the equivalent) in English Language, English or English Literature and Mathematics (or 10 years' experience in the optical industry).

Part I of this examination covers Optics and ophthalmic lenses, ophthalmic frames; Part II, taken at least 1 year later, Optics, ophthalmic lenses and Visual Optics, the eye and vision, practical dispensing.

Candidates who pass the examination and obtain the certificate have the right to be admitted to the Freedom of the Company at 21—and the privilege of nomination to the Freedom of the City of London. This privilege is granted only to British subjects, although others may be permitted to take the examinations.

Dispensing Diploma of the British Optical Association (65, Brook Street, London, W.1) (**B.O.A.(Disp.)**). Candidates for this certificate must have taken one year's full-time or equivalent part-time study before taking Part I; a further year's workshop and other practical training must be taken before Part II can be taken.

The minimum entry requirements are G.C.E. 'O' level passes (or the equivalent) in English, English Language or English Literature and Mathematics or Physics or General Science or Physics with Chemistry.

Part I of the examination consists of a written paper on Optics and ophthalmic lenses, and practical and oral examinations on frames, lenses, measurement and on Experimental Optics. Part II includes written papers on the anatomy of the eye and on ophthalmic lenses (advanced) and optical principles, and oral and practical examinations on practical dispensing, measurement, frame repairs and manipulation.

On passing both parts of the examination and reaching the age of 21 the candidate may become an Associate of the Association and will be granted the Dispensing Diploma.

COURSES

Courses leading to the qualifying examinations of the above associations are available at:

City College for Further Education, Bunhill Row, London, E.C.1; Bradford Technical College, Great Horton Road, Bradford, 7; Stow College, 43, Shamrock Street, Glasgow.

ORTHOPTICS

See note on State Registration, page 790.

British Orthoptic Society

Tavistock House, Tavistock Square, London, W.C.1

The Society is the professional association of orthoptists and is represented on the British Orthoptic Board.

Members are qualified orthoptists who hold the Diploma of the British Orthoptic Board (Tavistock House (North), Tavistock Square, London, W.C.1).

Associate Members are students working for the Board's examinations.

EXAMINATIONS OF THE BOARD

Diploma of the British Orthoptic Board (D.B.O.). Candidates who have passed the examination of the British Orthoptic Board are granted the above Diploma by the Faculty of Ophthalmologists. To qualify for this Diploma students must have taken a course lasting two years and three months at a recognised training centre.

The Preliminary examination is taken at the end of the first three months of training and covers General Anatomy and Physiology. The Intermediate, taken after one year, covers the special Anatomy and Physiology of the eye, the orbit and the visual apparatus of the brain, Optics, the eye as an optical instrument and errors of refraction with methods of diagnosis and treatment. The Final examination, taken at the end of the course, covers General Ophthalmology and Orthoptics.

For entry to a course a student must be at least 17 years old and have passed either G.C.E. or S.C.E. 'O' level in five subjects, including English Language or English. Study of Mathematics and Science is desirable, and candidates with one or more 'A' level passes may be preferred.

The following training schools offer courses leading to the D.B.O.:

Birmingham and Midland Eye Hospital, Church Street, Birmingham, 3; Children's Hospital, Ladywood Road, Birmingham, 16; Cardiff Royal Infirmary, Cardiff; Cheltenham General Hospital, Sandford Road, Cheltenham; Chester Royal Infirmary, Chester; Coventry and Warwickshire Hospital, Coventry; Glasgow Eye Infirmary,

Berkeley Street, Glasgow, C.3; Moorfields Eye Hospital, City Road, London, E.C.1, and High Holborn, London, W.C.1; Manchester Royal Eye Hospital, Oxford Road, Manchester; Oxford Eye Hospital, Walton Street, Oxford; United Sheffield Hospitals' Training School, Royal Infirmary, Sheffield, 6.

Teacher's Certificate of the British Orthoptic Board. A qualified orthoptist who has had two years' experience is eligible to enrol as a student teacher on the staff of a recognised school for the training of orthoptics teachers. After the two-year student teacher's course she will be entitled to sit the examination for the Assistant Teacher's Certificate, which can be replaced by a Teacher's Certificate after a further year's teaching experience.

The examination includes papers on the principles and practice of Orthoptics, the principles and practice of Teaching, the organisation of an Orthoptics department and training school, two viva voce examinations, a lecture to a class and practical work in clinical supervision of students.

OSTEOPATHY

The General Council and Register of Osteopaths

16, Buckingham Gate, London, S.W.1

The Register of Osteopaths, which is a voluntary body, was established in 1935. Osteopaths may not be admitted to the Register unless they have qualified at one of the schools or colleges recognised by the Register and have accepted the Register's code of ethics.

Members of the Register may use the designation **M.R.O.** (**Member of the Register of Osteopaths**).

TRAINING

The schools recognised by the Register in the United Kingdom are The British School of Osteopathy (16, Buckingham Gate, London, S.W.1) and The London College of Osteopathy (Andrew Still House, Dorset Square, London, N.W.1).

Diploma in Osteopathy. The British School of Osteopathy offers a four-year course in the principles and practice of Osteopathy, including clinical training and experience. Intending students are required to have G.C.E. or equivalent qualifications.

Successful candidates are awarded a Diploma in Osteopathy. The structure of the course is as follows:

First year: Pre-medical course in Biology, Physics and Chemistry.

Second year: Anatomy and Physiology, Histology, Embryology; introduction to the principles of Osteopathy; diagnosis.

Third and fourth years: Principles and practice of Osteopathy; Dietetics, medical and surgical diagnosis; minor surgery; Psychotherapeutics, Gynaecology and osteopathic techniques; practical training and clinical experience.

PACKAGING

The Institute of Packaging

Malcolm House, Empire Way, Wembley, Middlesex

Fellows (F.Inst.Pkg.) may be elected from among those who have been Members of the Institute for at least five years and have passed the Institute's Fellowship Examination (not yet in operation at the time of writing).

Members (M.Inst.Pkg.) must normally have passed the Institute's Entrance Examination, although occasionally people with considerable executive experience may be elected without examination.

Associates are people who are interested in packaging; or who are employed in packaging, are over 25 years old but do not qualify for Membership; or were Affiliates of the original Institute.

Honorary Members are elected for eminence in, or distinguished service to, packaging.

Students are those who are studying for the Institute's Entrance Examination. Candidates under 25 years must have G.C.E. 'O' level passes in two subjects including English Language (or an approved alternative qualification). Candidates over 25 years who do not hold G.C.E. passes must either submit evidence of equivalent qualifications or have had at least three years' experience in packaging.

The Membership Entrance Examination is held annually. The syllabus covers principles of packaging; applied packaging; shipping and unit containers and ancillary materials; packaging and production; industrial standards; display, making and identification; economics of packaging; package testing.

Evening courses are available at a number of technical colleges in preparation for the examination and short courses are arranged by the Institute.

PARK ADMINISTRATION AND GROUNDSMEN

Institute of Park and Recreation Administration (Inc.)
(formerly Institute of Park Administration)
Lower Basildon, Reading, Berkshire

Fellows (F.Inst.P.A.) must hold the Institute's Diploma in Park and Recreation Administration and have six years' experience as officers in the public horticultural service.

Associate (A.Inst.P.A.). Candidates must hold one of the following:

The Institute's Intermediate Examination; The Intermediate of the National Diploma in Horticulture; The Intermediate of the Institute of Landscape Architects; The College Certificate of the Institute; A degree in Horticulture; Diploma of the National Association of Groundsmen; University Diploma in Horticulture (Bristol, Nottingham and Reading); Qualifications of the Royal Botanic Gardens, Kew and Edinburgh. Other approved qualifications plus in each case five years' experience in the public horticultural service.

Licentiate (L.Inst.P.A.). This class of membership is open to those who are on the Administrative, Technical or Professional (A.P.T.) staff of a public parks department and have eight years' experience but are not eligible for other classes of membership. Applicants for this class must have been at least 45 years old on 1st September, 1958.

Registered Student. Candidates must hold one of the following qualifications:

The Institute's Entrance Examination; G.C.E. 'O' level passes or equivalent in four subjects including English Language, English Literature and either Mathematics or an approved science subject; Local government entrance examination; National Diploma in Horticulture Preliminary Examination.

Candidates must be under 25 years old.

THE INSTITUTE'S EXAMINATIONS

The Entrance Examination qualifies for Registered Studentship of the Institute and is confined to employees in the public horticultural service. It takes the form of a paper on general education, and covers English, Mathematics and General Science. (See 'Registered Student' above for alternatives to this examination.)

The Intermediate Examination is open to Registered Students and qualifies for Associate Membership of the Institute. Candidates must have had at least five years' experience in horticulture, four of them in the public horticultural service. The examination consists of two papers — General Horticulture and technical and administrative. Candidates who pass in these papers are called for a practical test. (See 'Associate' above for alternatives to this examination.)

The Diploma of Park Administration is open to those who have passed or been exempted from the Intermediate Examination and qualifies for Fellowship of the Institute. Candidates must have had at least six years' experience in horticulture and administration, four of them in the public horticultural service.

The syllabus covers all aspects of park administration including office and staff management, laws and regulations, catering and public speaking. A viva voce examination is given in addition to papers and candidates submit a thesis and plans for a set subject relating to park administration. No exemptions are granted from this examination.

Certificate of the College of Park Administration (run by the Institute). This Certificate gives exemption from the Institute's Intermediate Examination, qualifying the holder for Associateship of the Institute. The examinations for the Certificate are taken after a 12-month residential course at the college. Candidates for the course should have a good educational standard and considerable experience in horticulture. The course includes practical work, which is assessed. The final examination is written and oral. The syllabus is similar to that for the Intermediate Examination of the Institute, covering horticulture and arboriculture, recreation, entertainment and all aspects of administration.

National Association of Groundsmen

108a, Chessington Road, West Ewell, Surrey

The Association conducts examinations for a National Diploma in the Science and Practice of Turfculture and Sports Ground Management (N.D.T.) and a National Certificate in the Science

and Practice of Turfculture and Sports Ground Management.

Full Membership is open to anyone who has been employed for more than a year by any recognised sports association, club, school or local authority or similar body in the capacity of a head groundsman or a first assistant groundsman, or to any other assistant groundsman with special qualifications of experience and service.

Associate Membership is open to anyone who has been employed for more than a year as above as an assistant groundsman and who is over 18.

Junior Membership is open to anyone under 18 employed as above in the capacity of trainee, apprentice or assistant groundsman.

Honorary Membership is open to anyone concerned in the promotion of sport or in any trade relating to the occupation of groundsman or concerned in the promotion of objects akin to those of the Association.

PROFESSIONAL EXAMINATIONS

National Diploma in the Science and Practice of Turfculture and Sports Ground Management (N.D.T.). The examination for the Diploma is open to all practising groundsmen and greenkeepers who hold the Association's National Certificate 1st Class and to others whose candidature is accepted by the Association's Examination Board. The examination, which must be taken all at once, consists of two parts, written papers and practical and oral tests. The subjects for the written papers are as follows:

Practical Turfculture; Construction and Drainage of Playing Fields; Sports Ground Management; Turf Botany; Sports Ground Mechanisation; Weeds, Pests and Diseases; Local Government Administration.

The practical and oral tests are as follows:

Sports Ground Management (oral); Soils, Fertilisers, Seeds, Grasses and Weeds (oral and practical identification tests); Playing Facilities (Bowling Greens, Cricket Squares, Athletics, Tennis Courts); Machinery (oral with practical tests); Drainage and Levelling (oral with practical tests).

The National Certificate in the Science and Practice of Turfculture and Sports Ground Management may be awarded at three levels, 3rd, 2nd and 1st Class. The examinations are open to all practising groundsmen and greenkeepers and to others whose candidature is approved by the Association's Examination Board.

The examination for the 3rd Class Certificate consists of two parts, written and oral. The written part consists of one three-hour paper on Theory; the oral is a test on practical work. Candidates who

pass in both parts receive a Certificate 3rd Class; candidates who pass only the practical test receive a Certificate 3rd Class: Practical. Certificates are not issued in respect of the Theory paper alone.

Candidates for the examinations for the 2nd and 1st Class Certificates must hold the National Certificate 3rd Class in Practice and Theory. The examination for both 1st and 2nd Class Certificates consists of the same theory papers and practical tests, the distinction between awards being decided on the candidate's standard of attainment. Candidates who pass in both parts receive a Full Certificate; candidates who pass only the practical test receive a Practical Certificate. Certificates are not issued in respect of theory alone.

The written examination consists of two papers covering the following subjects:

Soils; Manures and Fertilisers; Plant Structure; Plant Physiology; Grasses and Turf Weeds; Weed Control; Turf Diseases and Insect Pests; Sports Ground Maintenance; Layout and Planning of Playing Fields; Playing Field Construction.

In the practical section candidates are required to demonstrate their ability to do all the practical work normally done on sports grounds.

PATENT AGENCY

To practise as a Patent Agent—defined under the Patents Act of 1949 as one who carries on 'for gain in the United Kingdom the business of acting as agent for other persons for the purpose of applying for or obtaining patents in the United Kingdom or elsewhere'—it is necessary to be entered on a Register kept under the authority of the Board of Trade. To be entered on the Register candidates must have passed the Intermediate and Final examinations qualifying them as 'Chartered Patent Agents' of the Chartered Institute of Patent Agents.

Chartered Institute of Patent Agents

Staple Inn Buildings, High Holborn, London, W.C.1

Fellows (C.P.A.) are Chartered Patent Agents who have passed the Institute's Intermediate and Final examinations and have had their names entered on the Register.

Associates are either technical assistants who have passed the Institute's Intermediate examination; or those whose connection with the law, the arts or science is considered by the Council to be able to advance the objects of the Institute.

Foreign and British Overseas Members are those qualified patent agents practising abroad.

Students of the Institute are not members but are attached to the Institute. Studentship is open to pupils (i.e. those who, having obtained a G.C.E. 'A' level pass in Physics or Chemistry and 'O' level passes in five subjects including English Language, a foreign language and Mathematics, work in a patent agent's office while studying part-time for the Institute's examinations) and to technical assistants (i.e. those who take a science or engineering degree, diploma or other qualification before entering a patent agent's office and undertaking part-time study for the examinations).

THE EXAMINATIONS

The Institute does not conduct preliminary examinations but requires candidates to hold certain external examinations qualifications.

Entrants to the profession must hold both:

- (i) Either G.C.E. 'O' level (or equivalent) passes in five subjects including English Language, Mathematics and a foreign language; or the University entrance examination of any British university.
- (ii) Either a G.C.E. 'A' level pass in Physics or Chemistry; or a degree in science or engineering of any British university; or an approved diploma or certificate in science or engineering; or the examination admitting to Associate Membership, Associateship, Membership or Fellowship of one of the following: the Institutions of Civil Engineers, Mechanical Engineers, Electrical Engineers, Chemical Engineers; the Royal Institute of Chemistry; the Institute of Physics. Or the O.N.C. in Chemistry, Applied Physics, or Chemical, Mechanical or Electrical Engineering.

The Intermediate Examination. Candidates for this examination must (a) either have passed an examination in each of (i) and (ii) above; or be entitled to practise as solicitors in the U.K.; or have been for five years members of the Examining Staff (Patents); and (b) have had at least three years' experience as a pupil or technical assistant to a qualified patent agent. This period may be reduced to two years in the case of a candidate who has a

diploma or certificate gained after a two-year full-time college course, and to one year in the case of the science or engineering graduate, the diploma or certificate holder who has taken a three-year full-time course, and the holder of the membership examination certificates of the professional bodies listed above. Candidates must be British subjects or citizens of the Republic of Ireland.

The examination consists of six papers; A, British Patent Law and Procedure; B, Overseas Patent Law and Procedure; C, British Law and Procedure relating to designs and trade marks; D and E, Patent Agents' practice; and F, Manufacturers.

The Final Examination. Candidates for the Final examination must have passed the Intermediate; and either have had five years' experience as a pupil or technical assistant to a qualified patent agent (or two years' experience in excess of the time required for entry to the Intermediate); or be qualified to practise in the U.K. as a solicitor; or, having had five years' experience as a member of the Examining Staffs (Patents), have served for two years as a technical assistant or pupil to a patent agent.

There are five papers in the Final examination: G and H are two papers on the preparation of specifications for British and overseas patents from such material as a patent agent usually receives; I and J, two papers on the interpretation and criticism of British specification; and K, a paper on patent agents' practice.

(**The Patent Examiner** is a civil servant working for the Board of Trade and concerned with scrutinising all applications for patents. There are no specific examinations for Patent Examiners, who are normally graduates or diploma holders in science or engineering.)

PERSONNEL MANAGEMENT

Institute of Personnel Management

80, Fetter Lane, London, E.C.4

Members (M.I.P.M.) must hold a post in Personnel Management or a specialist function of Personnel Management and either:

- (a) have taken a course of training recognised by the Institute or passed the Institute's examination and have at least five years' experience; or
- (b) be a graduate of a British university and have at least seven years' experience; or

- (c) hold a senior post in Personnel work, be at least 35 years old and have at least seven years' experience.

Associate Members (A.M.I.P.M.) must hold a post in Personnel Management or a specialist function of Personnel Management and must either:

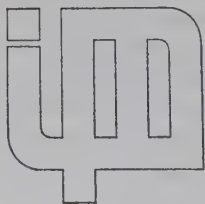
- (a) have taken a course of training recognised by the Institute or passed the Institute's examination and have two years' experience; or
(b) be a graduate of a British university and have at least four years' experience; or
(c) be at least 30 years old and have five years' experience.

Members and Associate Members are corporate members with full voting rights.

A Graduate Member (Grad.I.P.M.) is one who has taken a course recognised by the Institute or has passed the Institute's Examination, but has not had sufficient experience to be admitted as a Member or Associate Member.

A Student Member is one who is following a course of study recognised by the Institute.

An Affiliate is a non-corporate member who is working in an occupation in which knowledge of the principles of Personnel Man-



INSTITUTE OF PERSONNEL MANAGEMENT

SERVICES AND ACTIVITIES INCLUDE:

- conferences and courses
- information service
- regular branch meetings throughout the country
- appointments service
- publications, including *Personnel Management* (quarterly)

A full list of publications and further information is available from the Institute of Personnel Management, 80 Fetter Lane, London EC4

agement is desirable; or is a practising personnel officer who because of age, qualification or length of experience does not qualify for any other grade of membership, or (overseas) is a practising personnel officer.

EXAMINATIONS

The Examination of the Institute leads to Graduate Membership. It can be taken after a part-time or a full-time course. Complete exemption is granted to holders of the Diploma in Personnel Management and may be granted to holders of the Diploma in Management Studies.

Candidates must register as Student Members of the Institute — this can be held for four years only. The minimum qualification for entry is either G.C.E. in five subjects, including two at 'A' level, or experience of work in a personnel department. The examination covers Business Economics with Business Administration, Industrial Relations including legal aspects, Industrial Psychology and Sociology and Personnel Management.

A full-time course in preparation for the examination runs from September until June at Leeds College of Commerce.

Part-time courses in preparation for the examination. The majority of the following colleges offer courses in the evening but some are on a day, or half-day, release basis:

Luton College of Technology; Derby and District College of Technology; Thurrock Technical College; Harlow Technical College; South-East Essex Technical College; Farnborough Technical College; Highbury Technical College, Portsmouth; Watford College of Technology; Medway College of Technology, Chatham; Liverpool College of Commerce; St. Helens Technical College; Wigan and District Mining and Technical College; Leicester College of Technology; Ealing Technical College; Regent Street Polytechnic; Woolwich Polytechnic; Harrow Technical College; Peterborough Technical College; Rutherford College of Technology, Newcastle; Staffordshire College of Commerce, Wednesbury; Wolverhampton and Staffordshire College of Technology; Kingston-on-Thames College of Technology; Birmingham College of Commerce; Lanchester College of Technology, Coventry; Leeds College of Commerce; Sheffield College of Technology; Hull College of Commerce; Belfast College of Technology; Southampton College of Technology; East Hertfordshire College of Further Education; Blackburn

College of Technology and Design; Swansea College of Technology.

Correspondence Courses in preparation for the examination are offered by The International Correspondence School (Intertext House, Parkgate Road, London, S.W.11) and Metropolitan College (St. Albans, Hertfordshire).

The Diploma in Personnel Management is taken after a one-year full-time course. The Diploma is accepted by the Institute of Personnel Management in lieu of their own examination.

Diploma Courses are open to graduates, to those nominated by their organisation and to people with experience of industry or commerce. Selection is by interview. Candidates who are not graduates should normally be at least 24 years old with a good standard of education. The courses cover Principles and Practice of Personnel Management, Sociology, Industrial Law and Business Administration, etc. Practical work forms an integral part of the course.

Full-time Diploma Courses are offered by the following colleges:

Birmingham College of Advanced Technology; Bristol College of Science and Technology; University College of South Wales and Monmouthshire; John Dalton College of Technology, Manchester; London School of Economics and Political Science; Hendon College of Technology; Manchester College of Science and Technology; Liverpool University (two years); University of Oxford; Department of Social and Administrative Studies, University of Strathclyde; Royal College of Advanced Technology, Salford; Bradford Institute of Technology; Slough College.

PHARMACY

(including Pharmacology, Pharmaceutics and Dispensing)

The Pharmaceutical Society of Great Britain

17, Bloomsbury Square, London, W.C.1,
and 36, York Place, Edinburgh, 1

Fellows (F.P.S.) are elected for distinguished service within the profession.

Member (M.P.S.). Membership of the Society may be obtained by taking the Pharmaceutical Chemist Diploma of the Society or a

degree in Pharmacy followed by the qualifying examination of the Society in one subject only — Forensic Pharmacy. The three-year courses for these qualifications must be followed by a one-year period of practical experience before registration as a pharmacist.

Student Members are those who are studying for one of the two qualifications accepted by the Society for Membership status, namely The Pharmaceutical Chemist Diploma of the Society or an approved degree in Pharmacy.

EXAMINATION

The Pharmaceutical Chemist Diploma of the Pharmaceutical Society of Great Britain. For registration as a student a candidate must offer either: (i) G.C.E. 'A' level passes in Chemistry, Physics and either Biology or Botany or Zoology or Mathematics; or (ii) (for those educated in Scotland) qualifications equivalent to the Scottish Universities Entrance Boards' Attestation of fitness (*see* Degrees) or S.C.E. Higher Grade passes in four subjects or three subjects on the Higher Grade and two on the Ordinary Grade. Scottish candidates are required to pass the Society's Entrance Examination in Chemistry, Physics and either Biology or Mathematics.

The examination is taken in three parts.

Courses for the Diploma are offered at:

Robert Gordon's Technical College, Aberdeen; Welsh College of Advanced Technology; Heriot-Watt College, Edinburgh; College of Technology and Commerce, Leicester; College of Technology, Liverpool; College of Technology, Portsmouth; Technical College, Sunderland.

The Pharmaceutical Society of Northern Ireland

73, University Street, Belfast

A Member (M.P.S.) is one who has passed the examinations of the Society and has registered as a pharmaceutical chemist.

Registered Students are those who are preparing for the Society's examinations. For admission as a Student a candidate must offer G.C.E., S.C.E. or Grammar School Certificate of the Ministry of Education for Northern Ireland passes in English Language, a mathematical subject, Physics, Chemistry and one other subject.

EXAMINATIONS

Part I Qualifying Examination. This is open to registered students of the Society who have taken an approved one-year course

of instruction in Chemistry, Biology and Physics, which are the only subjects of the examination.

Part II Qualifying Examination. This is open to students who have passed Part I and have served a two-year period of pupilage with a qualified pharmacist. Part A of Part II is taken after one year, Part B a year later. Part A has as its subjects Pharmaceutical Chemistry, Pharmaceutics, Pharmacognosy and Physiology; Part II also covers Pharmaceutical Chemistry and Pharmaceutics.

Graduates in Pharmaceutics of the Queen's University, Belfast, may be granted exemption from the parts of the examination covered in their course, provided that they undergo a course of practical training and are at least 21 years old.

Note. This method of qualification is about to be discontinued; the last candidates for the Part I Qualifying Examination were admitted to their courses in September 1965. In future, the Pharmaceutical Society intends to register only those candidates who hold the B.Sc. (Pharmaceutics) degree of Queen's University, Belfast.

UNIVERSITY DEGREES

(i) FIRST DEGREES IN PHARMACY

The following courses are offered, with the course durations and requirements shown.

Birmingham C.A.T. B.Sc.(Hons.): 3 years. 'A' level passes in a mathematical subject, Physics and Chemistry.

Bradford I.T. B.Pharm.: 3 years. 'A' level passes in Chemistry and 2 from Physics, a mathematical subject and a biological subject.

Bristol C.S.T. B.Pharm.(Hons.): 3 years. 3 'A' level passes including Chemistry, Physics or a mathematical subject, and a biological subject.

Chelsea C.S.T. B.Pharm.: 3 years. 'A' level passes in Chemistry and two from Physics and a mathematical or biological subject.

Heriot-Watt College. B.Sc. in Pharmacy: 4 years. 'A' level passes in Mathematics and Physics or Chemistry.

Leeds. B.Sc.(Hons.): 3 or 4 years. For 4-year course 2 'A' level passes; for 3-year course 'A' level passes in Physics and Chemistry and either Zoology or Botany.

University of London School of Pharmacy. B.Pharm.: 3 years. 'A' level passes in Physics, Chemistry and Botany, Zoology or Biology.

London (External). B.Pharm.(Hons.): 3 years. Courses available at:

Brighton College of Technology; Liverpool College of Technology; Leicester College of Technology and Science; Sunderland Technical College.

Manchester. B.Sc.(Hons.): 3 or 4 years. 'A' level passes in Chemistry and two from Physics, Botany, Zoology or Biology.

Nottingham. B.Pharm.: 3 or 4 years. For 4-year course 2 'A' level passes; for 3-year course passes in Chemistry and Physics (or, exceptionally, Mathematics and a biological subject).

Strathclyde. B.Sc.(Hons.): 4 years. 'A' level passes in Physics and Chemistry. Exemption from first year of course may be granted for good passes in Chemistry, Physics and a biological subject.

Wales (Cardiff). B.Pharm.: 3 years. For 4-year course 2 'A' level passes; for 3-year course 3 'A' level passes including Physics, Chemistry and a biological subject.

Welsh C.A.T. B.Pharm.: 3 years. (Style of degree subject to final approval.) 'A' level passes in Chemistry, Physics and either a mathematical or biological subject.

(ii) HIGHER DEGREES IN PHARMACY

The following institutions offer higher degrees in Pharmacy:

Birmingham C.A.T. M.Sc.: by course and examination. **M.Sc.** and **Ph.D.** by research.

Bradford I.T. Students may register for higher degrees (**M.Pharm.** by research or course and **Ph.D.**).

Bristol C.S.T. Full-time and sandwich courses leading to higher degrees are planned (**M.Pharm.** and **Ph.D.**).

Chelsea C.S.T. M.Pharm. and **Ph.D.** by advanced study or research.

Leeds. M.Sc. and **Ph.D.**

University of London School of Pharmacy. M.Pharm. and **Ph.D.** **M.Pharm.** is granted normally to London **B.Pharm.** internal graduates only.)

London (External). M.Pharm. and **Ph.D.** degrees can be taken only by holders of the London **B.Pharm.**

Manchester. M.Sc. and **Ph.D.**

Nottingham. M.Pharm. and **Ph.D.**

Strathclyde. M.Sc.: by course or by research. **Ph.D.**

Wales (Cardiff). M.Pharm. and **Ph.D.**

Welsh C.A.T. M.Sc. and **Ph.D.** by advanced study or research.

(iii) FIRST DEGREES IN PHARMACOLOGY

The following courses are offered, with the course requirements and durations shown.

Chelsea C.S.T. B.Sc.(Hons.): 4 years. 'A' level passes in Chemistry and either Physics, Zoology or Biology.

Edinburgh. B.Sc.(Hons.): 4 years. 3 'A' level passes including Physics, Chemistry and either Zoology or Botany.

Glasgow. B.Sc.(Hons.): 4 years. 3 'A' level passes including either Physics or Chemistry.

Leeds. B.Sc.(Hons.): 3 years. 'A' level passes in Physics, Chemistry and Zoology or Botany.

Liverpool. B.Sc.(Hons.): 3 or 4 years (depending on 'A' level performance). 3 'A' level passes from Physics, Chemistry, a mathematical or biological subject.

St. Andrews. B.Sc.(Hons.): 4 years. 'A' level pass in Chemistry and one of Physics, Botany, Zoology, Biology and a mathematical subject.

(iv) HIGHER DEGREES IN PHARMACOLOGY

In the following institutions with Pharmacology departments students may be accepted for **M.Sc.** and **Ph.D.** courses:

Universities of Leeds; Liverpool; London (University College); Manchester; Edinburgh; Glasgow; St. Andrews; Chelsea College of Science and Technology.

(v) FIRST DEGREE IN PHARMACEUTICS

Belfast. B.Sc.: 4 years. 'A' level passes in Physics and Chemistry.

(vi) HIGHER DEGREES IN PHARMACEUTICS

Students may be accepted for **M.Sc.** and **Ph.D.** courses at Queen's University, Belfast.

Note. A B.Sc. Hons. Degree in Psychology and Pharmacology can be taken at the University of Manchester.

OTHER QUALIFICATIONS

Diploma in Pharmaceutical Analysis. Awarded by the Joint Examinations Board of the Royal Institute of Chemistry and the Pharmaceutical Society of Great Britain. The examination for this Diploma is open only to Members of the Pharmaceutical Society or of the Royal Institute of Chemistry. Candidates are normally expected to have had five years' or more postgraduate experience in pharmaceutical analysis, and may be called for oral

examination before being accepted for admission to the Diploma examination. The examination consists of: Section I, a paper in Chemistry—taken by members of the Pharmaceutical Society—or a paper in Pharmacy—taken by members of the Royal Institute of Chemistry; and Section II, theoretical and practical examinations.

Society of Apothecaries (Blackfriars Lane, Queen Victoria Street, London, E.C.4) **Assistants in Dispensing Examination.** This may be taken by assistants in hospitals and other dispensaries. They should be at least 18 years old and have a good standard of education and two years' practical experience under the supervision of a registered pharmaceutical chemist. The examination consists of written, oral and practical tests in Pharmacy and written and oral tests in *Materia Medica*.

A list of classes is obtainable from the Society of Apothecaries.

PHOTOGRAPHY

The Institute of Incorporated Photographers

38, Bedford Square, London, W.C.1

(Formerly the Institute of British Photographers — awarded **F.I.B.P.** and **A.I.B.P.**).

Honorary Fellows (**Hon. F.I.I.P.**) are usually elected from among persons who are not professional photographers but are interested in and have rendered distinguished service to Photography.

Fellows (**F.I.I.P.**) are elected from among Associates of the Institute, for ability and experience in one or more branches of photography. A Fellow may describe himself as an 'Incorporated Photographer'. Fellowship is also obtainable by thesis.

Associates (**A.I.I.P.**) must either have passed or been exempted from the Institute's Final Examination and have had two years' approved professional experience or, exceptionally, may be elected on giving evidence of their ability and experience in photography, or by submitting a thesis on an approved subject. Associates may describe themselves as 'Incorporated Photographers'.

Licentiates must be at least 21 years old, have had a minimum of two years' experience in Photography or a related field and have a good standard of ability in photographic work. Licentiates may describe themselves as 'Incorporated Photographers'.

A Graduate is one who has passed the Institute's examinations, but has not completed two years' practical post-qualification experience.

Student Membership is open to those attending a recognised school of Photography or employed as a pupil or apprentice in Photography.

THE INSTITUTE'S EXAMINATIONS

Examinations are held at Preliminary, Intermediate and Final levels. Candidates must have taken a recognised course of instruction (at a technical college, by correspondence or in employment) based on the Institute's syllabus.

The Preliminary Examination. Candidates for this examination need have no basic educational qualification. The examination tests knowledge of the elements of Photography and is based on the Institute's syllabus in 'Intermediate'.

Exemption from the Preliminary examination is granted to holders of (a) the City and Guilds of London Institute Intermediate Certificate 1st or 2nd class, and (b) the first year examination certificates of the following colleges:

College of Art and Crafts, Birmingham; Blackpool Technical College; Ealing School of Photography; Manchester College of Science and Technology; College of Art and Crafts, Nottingham; School of Photography, The Polytechnic, Regent Street; School of Photography, County Technical College, Wednesbury.

The last Preliminary examination will be held in June 1966.

The Intermediate Examination. Candidates must have passed or been exempted from the Preliminary examination, must be registered students of the Institute and must have passed G.C.E. 'O' level (or an equivalent examination) in five subjects including English Language and a science subject.

The syllabus for Preliminary and Intermediate (which is also that of the C.G.L.I. Intermediate Certificate, *see below*) covers the following subjects: evolution and development of Photography; subject, composition, arrangement and lighting; optics; cameras; light sources; sensitive materials, light filters; sensitometry; exposure, making up solutions; processing; printing; faults; outline of colour photography; dark-room equipment, layout and techniques; care and maintenance of photographic and electrical equipment.

Exemption from the theory part of the Intermediate examination will be granted to holders of the C.G.L.I. Intermediate 1st Class Certificate or Final 1st or 2nd class.

Exemption from the theory and practical will be granted to holders of the second year examinations of the colleges listed above.

The Final Examination. Candidates must either have passed or been exempted from the Intermediate examination; they must also hold the five 'O' level G.C.E. (or equivalent) passes including English Language and a science subject which are required for entry to the Intermediate.

In the Final examination candidates specialise in one of the following subjects: commercial and industrial Photography; scientific and technical Photography; medical Photography; portrait Photography.

Full exemption from the Final examination will be granted to holders of the **Diploma in Photography** of the Polytechnic, Regent Street, London, W.1. The examination gives entry to Graduateship of the Institute.

Candidates who, after passing this examination, complete two years' approved experience are eligible for the Associateship of the Institute.

ADMISSION BY THESIS

Fellowship and Associateship candidates may submit a thesis instead of taking the above examinations. Theses may be submitted in the following sections:

- Education in Photography (Fellowship only).
- Forensic Photography.
- Industrial Photography.
- Medical Photography (Fellowship only).
- Scientific Photography.
- Photographic Science and Technology.

A greater degree of originality is expected of Fellowship candidates.

COURSES

Many technical colleges offer classes leading to the Institute's examinations—full-time and part-time. Two-year full-time courses lead to Intermediate and a further year to Final. It is worth mentioning that one school offers a full-time course in medical photography for candidates who have already reached the Institute's Intermediate standard; this is the London School of Medical Photography (St. Bartholomew's Hospital, London), run by the London teaching hospitals and having a very small annual intake.

The Royal Photographic Society

16, Princes Gate, London, S.W.7

Honorary Fellows (Hon. F.R.P.S.) are elected for distinction in the practice of Photography.

An Honorary Member is one who has rendered distinguished service to the Society or to Photography.

Fellow (F.R.P.S.). Associates of the Society may apply for Fellowship by submitting photographic work. Fellowship is granted in eleven sections and a candidate may be admitted to Fellowship in one or more sections. Outstanding ability, individuality and originality are required of applicants for this award.

The sections are:

- (1) Advertising, architectural, commercial, illustrative, industrial and press Photography.
- (2) Photography of an educational character.
- (3) Graphic arts processes.
- (4) Kinematography.
- (5) Medical Photography.
- (6) Nature Photography.
- (7) Pictorial Photography.
- (8) Portraiture and theatrical Photography.
- (9) Scientific research on photographic subjects.
- (10) Photography applied to scientific purposes.
- (11) Photographic technology.

Associate (A.R.P.S.). Ordinary Members of the Society may apply for Associateship by submitting photographic work in one or more of the sections listed under 'Fellowship' above. Associateship may be granted in more than one section. The award is granted in recognition of Photography of a good technical standard.

Ordinary Member and Junior Member. No qualifications are required for this class of membership, which is open to anyone interested in Photography, amateur or professional. Junior Members are under 21 years old.

CITY AND GUILDS OF LONDON INSTITUTE CERTIFICATES

The C.G.L.I. awards Intermediate, Final and Full Technological Certificates in Photography (Subject No. 107).

The Intermediate Certificate examination may be taken after a two-year full-time or longer part-time study at a technical or other college. The syllabus is the same as that for the Institute of Incorporated Photographers' Intermediate Examination. First and Second class Certificates are awarded (*see above*).

The Final Certificate examination is usually taken after a further year's training. The examination may be taken in one of two sections: I, Principles and Scientific Applications of Photography; or II, Portraiture and Commercial, Industrial and Advertising Photography. Having passed one, candidates may take the other if they wish. A written paper on technical knowledge of photography, and a paper and practical test on the Section chosen are also included. First and second class Certificates are awarded.

The Full Technological Certificate is awarded to candidates who pass in both sections of the Final, with 1st class in at least one section; have attended an approved course of training; have passed approved examinations in Mathematics, Physics and Chemistry; and have had prescribed technological experience.

OTHER QUALIFICATIONS

Certificate of Training of the National Council for the Training of Journalists. This is awarded after a three-year course for trainee press photographers; training is on the job and by evening and other part-time courses. The subjects covered include English and those aspects of Law which concern Photography as well as practical Photographing.

Candidates must have G.C.E. 'O' level or an equivalent qualification in English Language; a knowledge of typing is desirable. The standard of Photography required for the award of the Certificate corresponds to that of the Institute of Incorporated Photographers' or the C.G.L.I. Intermediate Examinations.

National Diploma in Journalism (Photography). (*See Journalism for National Diploma Regulations.*) The Diploma in photography is awarded after three tests: practical; a thesis or connected series of feature articles; and an examination in Photography, which is the Final Examination of the Institute of Incorporated Photographers.

QUALIFICATIONS IN CINEMATOGRAPHY

Royal College of Art. Diploma in Film and Television Production. The Diploma is taken after a three-year course which is designed for those wishing to enter film and television production. Students are normally at least 21 and have studied design or similar subjects at a college of art. Entrance to the course is by examination, in which students are required to produce an idea and outline treatment for a film or television programme, and also by the submission of scripts, photographs and sketch books. In the third

year of the course students work on a major project, a film or television programme, which is submitted for the Diploma.

The London School of Film Technique (35, Electric Avenue, London, S.W.9) provides a 52-week course and a 26-week Basic Training Course in film technique. The former course is open to students aged between 17 and 28 who have at least five 'O' level G.C.E. passes.

PROJECTIONISTS

The National Joint Apprenticeship Council (Seymour House, 17, Waterloo Place, London, S.W.1) administers two schemes of training, Film Exhibition Projectionists (England and Wales) and (Scotland). Candidates are usually between 15 and 18 and serve a four-year apprenticeship, the first six months of which are probationary. Training covers handling and maintenance of projection equipment, electrical installations and stage lighting for cinemas.

PHYSICS

The Institute of Physics and the Physical Society

(The two bodies were amalgamated in 1960)

47, Belgrave Square, London, S.W.1

Fellowship of the Institute of Physics (F.Inst.P.) is the senior professional grade and represents a very high standard of competence as a physicist. The usual route to Fellowship is by way of Associateship and candidates must be at least 30 years of age. The minimum period of responsible experience in research is seven years and in other work ten years. Academic research work will be expected to be similar to that required for a D.Sc. degree.

Fellowship of the Physical Society. Candidates must be at least 21 years of age. The classes of candidates eligible are: (i) holders of qualifications accepted for Graduateship of the Institute of Physics, (ii) holders of honours degrees of British universities provided Physics ranks as high as any other subject in the final examination, (iii) Honours graduates in Mathematics, Chemistry or Electrical Engineering engaged in work that requires a sufficient knowledge of Physics.

Associates of the Institute of Physics (A.Inst.P.) must be at least 25 years of age. They must either have passed the graduateship examination or hold a degree in Physics. In addition they

must have had responsible experience as a physicist of three years for holders of first or second class honours degrees or Diplomas in Technology (or an honours pass in the Graduate Examination) or five years' responsible experience with other honours degrees or Diplomas in Technology or passes in the Graduateship Examination. Also, graduates with first or second class honours in subjects other than Physics may be considered for election provided they have had at least five years' responsible work in Physics.

Graduateship of the Institute of Physics (Grad.Inst.P.) is the basic professional grade and entry requirements are: (i) candidates must be 21 years of age and have had approved general education, (ii) obtained a degree or diploma recognised as exempting by the Council, or passed the Graduateship Examination.

Students must not be less than 16 years of age and must supply evidence of satisfactory general education. They must be following a course in an approved university or college of technology or be following a recognised course of study that will lead to a qualification complying with the requirements of the Institute of Physics or will carry exemption from Part I of the Graduateship Examination.

EXAMINATION

The Graduateship Examination is held in two parts, and there is also a General Paper which is taken by candidates not possessing satisfactory evidence of general education. Exemption from Part I is granted to holders of H.N.D. in Applied Physics and generally also to holders of H.N.C. subject to an acceptable standard being reached in their examinations.

Courses of instruction covering requirements of the Graduateship Examination are conducted at the following colleges:

Mid-Essex Technical College; Newport and Monmouthshire College of Technology; Oxford College of Technology; Portsmouth College of Technology; Harris College of Further Education, Preston; Kingston College of Technology, Surrey; Paisley College of Technology; Robert Gordon's Technical College, Aberdeen.

Generally speaking, honours degrees in Physics at all British universities and at some Commonwealth universities are recognised as exempting, as well as first or second class honours in certain general or joint honours degrees in which Physics is a subject taken. In addition Diplomas in Technology in Applied Physics at certain colleges as well as certain college diplomas are recognised. External degrees of the University of London are recognised only when obtained by approved courses of study at specified recognised colleges.

UNIVERSITY DEGREES AND DIPLOMAS

(i) FIRST DEGREES

Honours degree courses are offered at the following universities. For details of higher and other degrees in Physics, reference should be made to the entries for individual universities in Part 4.

Aberdeen. B.Sc. or M.A. in Natural Philosophy: 4 years. 2 'A' level passes including Mathematics.

Belfast. B.Sc.: 3 or 4 years. Candidates are required to have 2 'A' level passes including one in Physics together with certain 'O' level passes.

Birmingham. B.Sc.: 3 years. 3 'A' level passes including Physics.

Bristol. B.Sc.: 3 years. 2 'A' level passes including Physics.

Cambridge. B.A.: Natural Science Tripos Part 2.

Durham. B.Sc. in Physics or B.Sc. in Applied Physics: 3 'A' level passes including Physics.

East Anglia. B.Sc.: 3 years. 2 'A' level passes including Physics.

Edinburgh. B.Sc.: 4-year course in **Physics, Chemical Physics or Mathematical Physics**. A Higher Grade pass in Mathematics and Science is required.

Essex. B.A. in Physics or Theoretical Physics: 3 years. 3 'A' level passes including two out of Chemistry, Mathematics and Physics.

Exeter. B.Sc.: 3 years. 2 'A' level passes including Physics.

Glasgow. B.Sc. in Natural Philosophy: 4 years. 3 'A' levels including Physics required.

Hull. B.Sc.: 3 years. 2 'A' level passes including Physics.

Keele. B.A.: 4 years. 2 'A' level passes.

Kent. B.Sc.: 3 years. 3 'A' level passes including Physics and Chemistry.

Lancaster. B.A.: 3 years. 2 'A' level passes.

Leeds. B.Sc.: 3 years (exceptionally a 4-year course). 2 'A' level passes including Physics required.

Leicester. B.Sc.: 3 years. 3 'A' level passes including Physics.

Liverpool. B.Sc.: 3 or 4 years. 3 'A' level passes including Physics.

London. B.Sc.: 3 years. At King's College 3 'A' level passes are required in either Pure and Applied Mathematics, Physics and Chemistry or Pure Mathematics and Physics and Applied Mathematics or Chemistry. At Bedford College, University College, Imperial College, Queen Mary College, Royal Holloway College, Westfield College, the Northern Polytechnic, Sir John Cass College,

West Ham College of Technology, Woolwich Polytechnic, 2 'A' level passes including Physics are required.

In addition to the universities and colleges listed above, honours degrees in Physics of the University of London may be obtained at the South-East Essex College of Technology, the Polytechnic, Regent Street, the Portsmouth College of Technology, and the Paisley College of Technology.

Manchester. B.Sc.: 3 years. 2 or 3 'A' level passes including Physics.

Newcastle. B.Sc.: for entry to 3-year course 3 'A' level passes including Physics are required; for 4-year course 2 'A' level passes may be considered.

Nottingham. B.Sc.: for entry to 3-year course 3 'A' level passes including Physics required; for 4-year course 2 'A' level passes are required.

Oxford. B.A.: 3 years. A general University requirement is 2 'A' level passes.

Reading. B.Sc.: 3 years. 3 'A' level passes including Physics.

St. Andrews. B.Sc.: 4-year course in **Physics or Electronic Physics or Physics with Theoretical Physics**. 2 'A' level passes including Physics.

Sheffield. B.Sc.: 3 years. 3 'A' level passes including Physics.

Southampton. B.Sc.: 3 years. 3 'A' level passes including Physics.

Strathclyde. B.Sc.: 4 years. 2 'A' level passes required.

Sussex. B.Sc.: 3 years. 2 or 3 'A' level passes.

Wales (Aberystwyth, Bangor, Cardiff, Swansea). B.Sc.: 3 years. 3 'A' level passes including Physics and, at Cardiff, Pure Mathematics.

Warwick. B.Sc.: 3 years. 2 or 3 'A' level passes, including Physics.

York. B.A.: 3 years. 3 'A' level passes including Physics.

(ii) UNIVERSITY CERTIFICATES AND DIPLOMAS

University of Birmingham: Postgraduate Diploma in Mathematical Physics. 1-year course.

University of Bristol: Postgraduate Diploma in Medical Physics. 1-year course.

University of Edinburgh: Postgraduate Diploma in the Physics of Elementary Particles. 1-year course.

Imperial College, London: Postgraduate Diplomas (D.I.C.) in various branches of Physics.

University of Reading: Postgraduate Diploma in Technical Physics. 1-year course.

University of Southampton: Postgraduate Diploma (D.U.S.) in High Temperature Gas Dynamics and Gas Physics. 1-year course.

University of Sussex: Postgraduate Diplomas in Theoretical Physics and Experimental Physics. 1-year courses.

University of Wales (Bangor): 1-year Postgraduate Diploma in Mathematical Physics. (**Aberystwyth**): Diploma in Physics of the Atmosphere. 1-year course.

(iii) FORMER DIP.TECH. COURSES, DEGREES OF THE NEW UNIVERSITIES AND OF THE C.N.A.A.

Courses at the institutions listed below now lead to degrees of the new universities. Normally, the 4-year courses are sandwich, and the 3-year are full-time courses.

Battersea C.A.T. B.Sc.: 3 or 4 years. 3 'A' levels including Physics preferred but O.N.C. also accepted.

Birmingham C.A.T. B.Sc. in Applied Physics: 4 years; in **Ophthalmic Optics:** 3 years. 2 'A' level passes including Physics required.

Bradford I.T. B.Tech.: 4 years. 'A' levels in Physics and Pure and Applied Mathematics required.

Bristol C.S.T. B.Sc. in Applied Physics: 4 years. 2 'A' levels including Physics required.

Brunel College. B.Tech. in Applied Physics: 4 years. 2 'A' levels including Physics required.

Chelsea C.S.T. B.Sc.: 3 years. 2 'A' levels including Physics.

Heriot-Watt College. B.Sc.: 4 years. 2 'A' levels including Pure and Applied Mathematics.

Loughborough C.T. B.Tech.: under consideration.

Northampton C.A.T. B.Sc. in Applied Physics: 3 or 4½ years. 2 'A' levels including Physics; in **Ophthalmic Optics:** 3 years. 2 'A' levels required.

Salford Royal C.A.T. B.Sc.: 3 or 4 years in Applied Physics. 2 'A' levels including Physics.

Welsh C.A.T. B.Sc.(Tech.) in Physics: 4 years. **B.Sc. in Ophthalmic Optics:** 3 years. 2 'A' levels including Physics.

Four-year sandwich courses in Applied Physics now lead to **degrees of the C.N.A.A.** at the following institutions. Entrance requirements are 2 'A' level passes or a good O.N.C. or O.N.D.

Borough Polytechnic; Brighton College of Technology; Lanchester College of Technology, Coventry; Liverpool College of Technology; Northern Polytechnic (Physics and Technology of Electronics); Portsmouth College of

Technology; Rugby College of Engineering Technology; Sunderland College of Technology; and the Woolwich Polytechnic.

COLLEGE DIPLOMAS AND ASSOCIATESHIPS

Blackburn College of Technology and Design: College Diploma in Spectroscopy. 1 year full-time.

Mid-Essex Technical College: 4 year sandwich course, College Associateship.

NATIONAL CERTIFICATES AND DIPLOMAS

Courses in Applied Physics are held at various colleges over the country.

The Ordinary National Certificate (O.N.C.) course is 3 years (part-time) in duration for students with full-time education up to the age of 16 (which includes Mathematics and Physics or General Science) or who have completed a preparatory part-time course. The course is 2 years (part-time) in duration for students with 'O' level passes in Mathematics, Physics and 2 other subjects or in Mathematics, Physics and Chemistry.

The Higher National Certificate (H.N.C.) is a 2-year part-time course and entrance requirement is O.N.C. or 'A' level passes in Mathematics, Physics or Chemistry, when the student can enter a conversion course.

The Higher National Diploma (H.N.D.) is 2-year full-time or 3-year sandwich course. Entry requirements are O.N.C. (with 2 credits) or 'A' level pass in Physics with 'A' level studies in Mathematics.

Courses for the Higher National Diploma are provided at the following institutions:

County Technical College, Wednesbury; Enfield College of Technology; Farnborough Technical College, Hampshire; Glamorgan College of Technology; Guildford County Technical College; Harris College of Further Education, Preston; Hendon College of Technology; Kingston College of Technology, Surrey; Letchworth College of Technology; Medway College of Technology, Kent; Mid-Essex Technical College; Newport and Monmouthshire C.T.; North Staffordshire College of Technology; Royal College of Advanced Technology, Salford; Rugby College of Engineering Technology; S.E. London Technical College; Sheffield College of Technology; Slough College; Sunderland Technical College; Watford College of Technology; West Ham College of Technology.

PHYSIOTHERAPY

See note on State Registration, page 790.

The Chartered Society of Physiotherapists

Tavistock House (South), Tavistock Square, London, W.C.1

Fellows (F.C.S.P.) are persons whose publications or original research in the field of Physiotherapy are outstanding.

Members (M.C.S.P.) must pass the Membership Examination, which is taken after a three-year full-time course at an approved training school. Candidates must be at least 18 years old and have G.C.E. or S.C.E. 'O' level passes in five subjects including English Language or English and a science subject. Many training schools expect candidates to have an 'A' level pass.

There are 37 training centres at various hospitals throughout the country offering courses leading to the Membership Examination; in addition training is available for a few civilians in the Navy, Army and R.A.F. schools of Physiotherapy. Blind students are trained at the Royal National Institute for the Blind School of Physiotherapy.

THE CHARTERED SOCIETY OF PHYSIOTHERAPY

Founded 1894

Incorporated by Royal Charter, 9th June, 1920

Patron: Her Majesty the Queen

President: Sir Cecil Wakeley, B.T., K.B.E., C.B., LL.D., D.Sc., F.R.C.S.

Physiotherapy means literally 'healing by physical means' and is treatment by therapeutic movement, electrotherapy, and massage. Chartered Physiotherapists treat patients under medical direction and in conjunction with any medical or surgical treatment the patient may be receiving.

The qualification Member of the Chartered Society of Physiotherapy—M.C.S.P.—is recognised by the Ministry of Health and the Scottish Home and Health Department, and those holding it are eligible for State Registration.

There are thirty-seven schools of physiotherapy in the British Isles where students may take the three-year full-time course leading to the Society's examinations. Each school is attached to a hospital, and lecturers include University staff and specialists in medicine and surgery as well as physiotherapy teachers.

For entry to training students must offer at least five G.C.E. subjects at 'O' level, including English Language and a science subject. Preference is given to candidates with a thorough knowledge of physics and chemistry and to those offering one or more subjects at 'A' level.

Full particulars can be obtained from The Secretary, The Chartered Society of Physiotherapy, Tavistock House (South), Tavistock Square, London, W.C.1.

The Faculty of Physiotherapists

29-30, St. Vincent Crescent, Glasgow, C.3

At the time of writing plans were under consideration to merge the Faculty with the Chartered Society of Physiotherapists.

Fellow (F.F.Ph.). Members of the Faculty who have practised continuously for not less than five years and who have rendered outstanding service to the profession or hold a recognised Teacher's Diploma may be elected as Fellows of the Faculty.

Member (M.F.Ph.). Candidates seeking admission to a course leading to this qualification should have passed the S.C.E. in either five subjects on the Ordinary Grade or in three subjects of which two are in the Higher Grade. English and a science subject are obligatory.

The course of training lasts for at least 39 months and is offered by the Scottish Physiotherapy Hospital, Glasgow.

POST-CREDENTIAL DIPLOMA

The Diploma in Human Kinetics is taken after a voluntary post-qualification course of six months at the Scottish Physiotherapy Hospital, but is open to students who have qualified at other training establishments as well as to members of the Faculty of Physiotherapists. It is taken directly after the qualifying course.

The Physiotherapists' Association

31, Queen Anne's Gate, London, S.W.1

Fellow (F.Phys.A.). This is an advanced qualification granted for an original thesis.

Member (M.Phys.A.). The examinations for this qualification are to be taken after a three-year full-time course, the first, pre-clinical, year of which is spent at a technical college, the other two years at an approved hospital training establishment, combining theoretical and practical work.

The basic requirements for entry to such a course are G.C.E. 'O' level passes in five subjects including English Language and two from Physics, Chemistry, Physics with Chemistry, General Science and Additional General Science and one from Biology, Zoology, Botany and Elementary Physiology. Candidates must be at least 17½ years old. The examination leads to the award of the **Licentiate in Physiotherapy and Medical Electricity (L.P.M.E.)**.

At the time of writing the Examining Board of the Association is in negotiation with hospitals and technical colleges in order to arrange courses.

PLASTICS (including Polymer Science)

The Plastics Institute 6, Mandeville Place, London, W.1

Fellows (F.P.I.) must be at least 30 years of age and be engaged in a technical position of superior responsibility in plastics, and have been engaged in the industry for at least 10 years. In addition, they must have been an Associate for at least three years. Alternatively, they must have held for at least 15 years a position of responsibility and attained a considerable standing.

Associateship (A.P.I.) is granted to candidates who have passed the Graduateship examination and who are over 25 years of age and have at least three years' technical experience in the plastics industry.

Graduates must be Students of at least six months' standing and have passed the Graduateship examination.

Junior Membership is granted, on application, to individuals under 25 years of age engaged in, associated with or in training for the plastics industry.

Ordinary Membership is granted, on application, to individuals interested in or connected with the plastics industry.

THE INSTITUTE'S EXAMINATIONS

The Institute defines three routes for obtaining Graduateship:

Chemistry: The examination is a joint one, held with the Institution of the Rubber Industry. Parts I to IV must be passed.

Physics: Candidates must pass all subjects in groups I, IIB, IIIB. Substantial exemption in groups I and II is granted to holders of appropriate degrees and similar qualifications.

Engineering: Parts A, B, C must be passed. Partial exemption in Part B is provided by appropriate degrees or similar qualifications.

Partial exemption is gained by holders of a number of different qualifications (including H.N.C., H.N.D., degrees, diplomas, C.G.L.I. certificates).

Total exemption from the examination is granted to a candidate of 30 years of age who has had at least seven years' approved experience, and satisfies the Council of his knowledge of Plastics Science or Technology at an interview and has one of the following qualifications:

- (i) A first class or second class honours degree (U.K. universities) in Chemistry; Applied Chemistry, subject to approval of the syllabus content; Chemical Engineering; Physics; Engineering (Mechanical or Electrical).
- (ii) A lower level degree in science plus a higher qualification in an appropriate subject obtained by examination or thesis.
- (iii) A pass degree in Engineering (Mechanical or Electrical) plus a higher degree in Engineering.
- (iv) A first class or second class Diploma in Technology in Applied Chemistry; Applied Physics; Chemical Engineering; Mechanical Engineering; Electrical Engineering.
- (v) A pass Diploma in Technology plus an appropriate higher qualification.
- (vi) One of the following qualifications: A.R.I.C.; A.Inst.P.; A.M.I.Mech.E.; A.M.I.E.E.; A.M.I.Chem.E.

Qualifications claimed to be equivalent to the above will be considered on their merits.

The Council may allow an applicant for Associateship to demonstrate his knowledge of the Science and/or Technology of Plastics by submitting a thesis or dissertation instead of completing the Institute's Examination, but this concession is available only to those of mature years and of approved experience in other respects. Such applicants will be called upon to attend a viva voce examination.

Courses covering the Graduateship requirements are held at the following:

Borough Polytechnic; Brunel College; National College of Rubber Technology; Bradford Institute of Technology; Rutherford College of Technology, Newcastle; John Dalton College of Technology, Manchester.

The Diploma of the Plastics Institute is intended for technicians. It is awarded on examination or exemption from the examination. The Diploma is awarded to holders of the Full Technological Certificate of the City and Guilds of London Institute in Technology of Plastics and an 'O' level pass in English. Courses covering the Diploma requirements are held at the following:

Borough Polytechnic; Brunel College; National College of Rubber Technology; Rutherford College of Technology,

Newcastle; John Dalton College of Technology, Manchester; Stroud and District Technical College.

Exemptions may be gained by holders of various other qualifications.

UNIVERSITY DEGREE

(i) FIRST DEGREE

University of Manchester. B.Sc.(Hons.) in Polymer Chemistry (Faculty of Technology).

(ii) DIPLOMAS IN TECHNOLOGY: B.SC. DEGREE OF THE G.N.A.A.

Courses for Diplomas in Technology were offered at Brunel College and Birmingham College of Advanced Technology (these courses will lead to degrees of the new universities) and at the Borough Polytechnic, London (this will lead to the B.Sc. degree of the C.N.A.A.).

COLLEGE DIPLOMAS

Bradford I.T.: Postgraduate Diploma in High Polymer Chemistry. 1-year course.

Royal College of Science and Technology, Glasgow: Postgraduate Diploma (D.R.C.) in Polymer Science. 1-year course.

CITY AND GUILDS OF LONDON INSTITUTE CERTIFICATES

C.G.L.I. examinations are held in Technology of Plastics (Subject No. 11). The Full Technological Certificate is awarded to candidates who pass the C.G.L.I. full examination and can provide separate evidence of knowledge of allied science subjects (i.e. O.N.C., 'A' level or S.C.E. (higher grade) or other equivalent qualifications).

POPULATION REGISTRATION

The Institute of Population Registration

11, Park Square, Leeds, 1

The Institute consists of people engaged in the Births, Marriages and Deaths Registration Service and in work associated with the production of Vital, Health and Social Statistics, including the Census of Population.

(i) CORPORATE MEMBERSHIP

Fellowship (F.I.R.) is awarded to Members in recognition of outstanding service to the Institute.

Members (M.I.R.) must be at least 30 years old, must have been Licentiates for at least five years and must have passed the Institute's Final Examination.

Licentiates (L.I.R.) must be at least 25 years old, must have had at least two years' experience in the profession and must have passed the Institute's Intermediate Examination.

(ii) NON-CORPORATE MEMBERSHIP

Associates are those who are employed in the profession but are not eligible for corporate membership.

Students must be at least 21 years old, must work in or wish to enter the profession, and must hold G.C.E. 'O' level (or equivalent) passes in five subjects including English Language. Applicants who satisfy these requirements are registered as Student (Preliminary) members until they reach the required standard; other applicants are registered as Student (Intermediate) members.

The Institute also elects as **Honorary Members** such people as in their opinion merit the honour.

(iii) THE INSTITUTE'S EXAMINATIONS

The Intermediate Examination. Candidates must be registered Students (Intermediate). The Examination, all subjects of which must be passed at the same sitting, covers the following groups: A, Law and practice relating to Birth and Death registration; B, Law and practice relating to marriage preliminaries and registration; C, Law and practice relating to other statutory duties of registration officers.

Exemption is granted to those who hold the Scottish Certificate in Registration Law and Practice, which covers similar ground.

Candidates successful in the examination are eligible, on reaching the age of 25 years, for admission as Licentiates of the Institute.

The Final Examination. Candidates must be Licentiates of the Institute, i.e. have passed the Intermediate Examination and satisfied the other requirements (*see above*). The syllabus for the Final covers: I, theory of Vital Registration; II, population registration; III, the population census; and IV, elements of Vital and Health Statistics. One paper is set on Parts I and II, one on Parts III and IV; these two papers may be taken separately or together. Where law and procedure differ, two versions of a question are given, one for England and Wales and one for Scotland.

Candidates successful in the Examination are eligible on reaching the age of 30 years and satisfying the other requirement (*see above*) for admission to full Membership of the Institute.

PRINTING (Including Paper Science)

The Institute of Printing Ltd.
44, Bedford Row, London, W.C.1

Founder Members are those who have been concerned with the formation of the Institute, and whose function is to form the first Council and guide the affairs of the Institute in its early years.

Fellows (F.I.O.P.) must be at least 33 years of age and qualified as Corporate Members. In addition, they must have been engaged for a sufficient period in an important position of responsibility in or connected with the industry and have made a distinctive contribution to printing and bookbinding.

Honorary Fellows (Hon.F.I.O.P.) are elected in recognition of outstanding services to printing or bookbinding or to the Institute.

Associate Members (A.M.I.O.P.) are persons who are at least 24 years of age and have been engaged for at least three years in a position of responsibility in the industry since becoming a Graduate; *or* at least 26 years of age and have been engaged for at least five years in a position of responsibility in the industry and obtained such qualifications as shall be approved by the Council; *or* at least 30 years of age, and have received a good general and scientific education and have been engaged in a position of substantial responsibility in the industry for at least five years. Such candidates may be required to pass parts of the Institute's examination or present a thesis in lieu of this.

Graduates (Grad.I.O.P.) must be at least 21 years of age and have received approved training and passed, or have obtained exemption from, the whole of the Institute's examinations.

Affiliates must be at least 21 years of age and not qualified for Associate Membership, but have had suitable experience of the industry and be actively interested in the advancement of bookbinding or printing. Submission of a technical essay may be required of candidates.

Students must be at least 16 years of age and have passed a preliminary qualifying examination or reached a prescribed educational standard, and be following or intending to follow an approved course of further education.

THE INSTITUTE'S EXAMINATION

The examination is in three parts.

Exemption from Part I on a subject-for-subject basis is obtained by holders of a G.C.E. 'O' level pass in Technical or Machine Drawing; Endorsed Ordinary Certificate in Printing; G.C.E. 'A' level passes or other equivalent qualifications. Complete exemption from Part I is gained by holders of Endorsed Ordinary Certificates in Printing with additional passes in approved endorsement subjects.

Exemption from Part II is gained on a subject-for-subject basis by holders of an Endorsed Higher Certificate in Printing, or an equivalent qualification.

Exemption from Parts II and III is gained by holders of a Higher Diploma in Printing or an Endorsed Higher Certificate in Printing with additional approved endorsement subjects and a pass in Industrial Administration, or other approved equivalent qualifications.

The British Federation of Master Printers

11, Bedford Row, London, W.C.1

EXAMINATIONS

The Federation conducts the examinations listed below. The instruction is given by means of correspondence courses and the Federation conducts examinations at the end of the course.

Preliminary Technical Knowledge: A first-class pass is a prerequisite for entry for administrative personnel to advanced qualifications of the C.G.L.I.

The Costing Course: Preliminary, Intermediate and Final.

The Estimating Course: Stages I and II.

Salesmanship.

UNIVERSITY DEGREE AND DEGREE OF THE C.N.A.A.

Manchester. B.Sc.(Tech.) and A.M.C.S.T. in Paper Science: 3 years. 'A' level passes in Physics, Chemistry and an approved mathematical subject required.

A four-year sandwich course leading to the honours degree

UNIVERSITY OF MANCHESTER FACULTY OF TECHNOLOGY

(The Manchester College of Science & Technology)

DEGREES IN PAPER SCIENCE

B.Sc.

Based on studies in Physics, Chemistry and Engineering the course is designed to train students for careers in the paper and allied industries where they have excellent prospects in manufacturing, converting, materials supply and in research and development.

M.Sc. and Ph.D.

Good facilities are available for research leading to the higher degrees, and enquiries from graduates in Technology, Physics or Chemistry will be welcomed.

* * *

New well equipped laboratories and an experimental paper machine are provided in the Paper Science Building, opened in 1963; it is the only one of its kind in a university in the United Kingdom.

Undergraduate and postgraduate scholarships are offered by the paper industry and other sources.

Further particulars may be obtained from

**The Registrar,
The Manchester College of Science and Technology,
Manchester 1**

(B.Sc.) of the C.N.A.A. is offered at the Watford College of Technology. Candidates are required to have two appropriate 'A' level passes in science subjects.

CERTIFICATES AND DIPLOMAS

The Institute of Printing will apply to the Department of Education and Science for a National Certificate scheme. In the meantime, the Department and the Institute are jointly endorsing Certificates awarded by approved colleges. Such Certificates are called **Endorsed Certificates**.

The Ordinary Certificate in Printing is a three-year part-time course for 16-year-olds. Exemption from the first year, on a subject-for-subject basis, will be allowed for passes in G.C.E. 'O' level, and from the second year for passes at 'A' level.

Higher Certificates in Printing are awarded at the end of a two-year part-time course for holders of the Ordinary Certificate.

Ordinary Diploma in Printing is a two-year full-time course.

The Higher Diploma in Printing is a three-year sandwich course, open to holders of Ordinary Certificates or Diplomas.

Courses leading to the Higher Diploma are offered at the Watford College of Technology and at the Nottingham and District Technical College.

COLLEGE ASSOCIATESHIPS AND DIPLOMAS

Courses are offered at the following institutions:

Watford College of Technology: 3 years full-time, College Diploma in General Printing; 3 years full-time, College Diploma in Typographic Design.

Maidstone College of Art: 2 years full-time, College Diploma in Design for Printing.

Leeds College of Technology: 3 years full-time, College Diploma in Printing.

London College of Printing: 3 years full-time, College Diploma in Printing Administration; 3 years full-time, College Diploma in Printing Technology; 2 years full-time, College Higher Diploma in Printing Administration; 2 years full-time, College Certificate in General Printing.

Manchester College of Science and Technology: 3 years full-time, College Associateship in Printing; 2 years full-time, College Certificate in Graphical Reproduction.

Oxford College of Technology: 3 years full-time, College Diploma in Book and Magazine Publishing and Production.

Heriot-Watt College: College Associateship in Printing.

CITY AND GUILDS OF LONDON INSTITUTE EXAMINATIONS

The C.G.L.I. conducts the following examinations:

Paper and Board Making Practice (Subject No. 165).

Science and Technology of Paper and Board Making
(Subject No. 166), Intermediate and Final.

Typographical Design (Subject No. 200), qualifying papers
and Full Technological Certificate.

Compositor's Work (Subject No. 201), Intermediate and
Final.

Line Composition (Subject No. 202).

'Monotype' Composition (Subject No. 203).

Letterpress Machine Printing (Subject No. 205), Inter-
mediate and Final.

Photogravure Machine Printing (Subject No. 206), Final.

Letterpress Rotary Machine Printing (Subject No. 207),
Advanced.

'Monotype' Caster Work (Subject No. 208), Intermediate
and Final.

Electrotyping and Stereotyping (Subject No. 209), Inter-
mediate and Final.

Photo-engraving (Subject No. 210), Intermediate and Final.

Photogravure (Subject No. 211), Intermediate and Final.

Photolithography (Subject No. 212), Intermediate and Final.

Lithographic Printing (Subject No. 215), Intermediate and
Final.

Craft Certificate in Bookbinding and Printing Warehouse
Practice (Subject No. 216).

Advanced Craft Certificate in Bookbinding (Subject No.
217).

Advanced Craft Certificate in Publisher's Edition Book-
binding (Subject No. 218).

Advanced Craft Certificate in Printing Warehouse Practice
(Subject No. 219).

General Survey of the Printing Industry (Subject No. 221).

Technical Processes of Printing (Subject No. 222).

Appreciation of Design and Colour in Printing (Subject
No. 223).

Applications of Science in Printing (Subject No. 224).

(Subjects Nos. 221 to 224 are for the award of a F.T.C.
in Printing Subjects.)

Printer's Costing (Subject No. 225).

Printer's Estimating (Subject No. 226).

Printing Administration (Subject No. 227).

Graphic Reproduction (Subject No. 325) (Basic Craft Certificate; first examination 1967).

Printing Ink Technician's Certificate and Advanced Certificate (Subjects Nos. 250 and 251).

EXAMINATIONS OF THE REGIONAL EXAMINING UNIONS

The Union of Lancashire and Cheshire Institutes conducts an examination for the Compositor's Course.

PROBATION WORK

Probation Officers are social workers who deal with people who are placed by the courts under their supervision.

ENGLAND AND WALES

To qualify for probation work candidates must complete a course run by the Home Office with the advice of the **Probation Advisory and Training Board** (Home Office, Whitehall, London, S.W.1).

Applicants for the training course who are aged between 20 and 26 should hold a recognised university qualification in Social Science, or be at university entrance standard. Applicants over 27 should either hold a recognised qualification in Social Science (e.g. a Diploma) or have had experience in social work or related work.

The course combines theoretical and practical work and covers the Social Services, Psychology, Criminology and the Law relating to probation.

The length of the course depends on the age and previous qualifications of the candidate:

- (1) For those who hold a university qualification in Social Studies: either a three-month residential course in London and six months' practical work; or a one-year Applied Social Studies course at a university.
- (2) For graduates in other subjects: either a one-year postgraduate course in Social Studies at a university followed by one of the courses in (1) above; or a 17-month postgraduate university course in Social Studies geared to probation work.

- (3) For those under 27 who have no university qualification: a two-year university course for a diploma or certificate in Social Studies followed by one of the courses in (1) above.
- (4) For those over 27 who have no university qualification a three-month residential course in London followed by nine months' practical training.

SCOTLAND

Most appointments in Scotland are made from people whose names appear on the Central Register maintained by the **Scottish Probation Advisory and Training Service** (St. Andrew's House, Edinburgh, 1).

Candidates for registration must be between 22 and 45 years old. There are no set educational requirements and selection is by scrutiny of the application form and by interview and tests.

Certificate of Qualification of the Scottish Probation Council. Successful applicants normally are then sent for a one-year course to the Scottish Probation Training Course at Glasgow. Social Science graduates or diploma or certificate holders may be appointed without taking the course: the course may be modified for those with relevant qualifications.

The course is practical and theoretical and covers Social Services, Comparative culture, Psychology, Criminology and the Law relating to probation work. Students whose course work is satisfactory are awarded the Certificate of Qualification of the Scottish Probation Council.

NORTHERN IRELAND

Qualifications for entry to the probation service in Northern Ireland are the same as those in England and Wales, and officers attend the Home Office Training course and refresher courses in London.

PSYCHIATRIC SOCIAL WORK

The Association of Psychiatric Social Workers

71, Albany Street, London, N.W.1

Psychiatric Social Workers help patients and their families with the problems created by mental illness. To qualify for this work

candidates must hold a degree or diploma in Social Studies supplemented by experience in social work. They must then take a course of professional training at a university.

The following university courses are approved by the Association of Psychiatric Social Workers as providing professional training:

Queen's University, Belfast: Diploma in Social Studies (Psychiatric Social Work option).

Birmingham: Diploma in Applied Social Studies.

Edinburgh: Certificate in Psychiatric Social Work.

Leeds: Certificate in Psychiatric Social Work.

Liverpool: Diploma in Applied Social Studies (mental health option).

London (L.S.E.): Diploma for Social Workers in Mental Health.

Manchester: Certificate for Psychiatric Social Workers.

Newcastle: Certificate in Applied Social Studies.

St. Andrews: Diploma in Applied Social Studies (Psychiatric Social Work option).

Southampton: Diploma in Applied Social Studies.

Wales (Cardiff): Diploma in Applied Social Studies.

Other courses are under consideration.

All courses last for one year except those at Newcastle, Southampton and Cardiff, which last for 16 months. Candidates must be at least 27 years old and must be recommended by a selection committee. The courses include practical training in child guidance clinics or psychiatric hospitals.

PSYCHOLOGY

(For Medical Psychology *see* Medicine, page 792)

In order to be employed as a professional psychologist it is necessary to hold an honours degree and to have taken a post-graduate professional qualification.

British Psychological Society

Tavistock House South, Tavistock Square, London, W.C.1

Fellowship is granted in recognition of higher psychological qualifications.

Associates. Graduate Members of the Society may be elected

to Associateship when they have completed at least two years' research work or approved employment in Psychology.

Graduate Members. To qualify for membership a candidate must hold either a university degree in which Psychology has been taken as a main subject or an approved postgraduate qualification in Psychology (or an approved equivalent).

Foreign Affiliates are members of foreign psychological societies.

Subscribers need have no technical qualification in Psychology: they are those who are interested in the Society's work.

Student Subscribers are students of Psychology in universities and other institutions.

UNIVERSITY DEGREES AND DIPLOMAS

(i) FIRST DEGREES

First honours degrees in Psychology are offered at the following universities with course lengths and entry requirements shown.

Aberdeen. M.A. Psychology: 4 years. 2 'A' level G.C.E. or S.C.E. passes. **B.Sc. Psychology:** 4 years. 'A' level G.C.E. or S.C.E. passes from among the following subjects: an approved mathematical subject, Physics, Chemistry, Botany, Zoology, Biology. Exemption from the first year may be granted for 3 good 'A' level passes. **M.A. (Combined Hons.):** 4 years. Psychology may be combined with Economic History and Theory, Philosophy, English. 2 'A' level G.C.E. or S.C.E. passes.

Battersea C.A.T. B.Sc. (Hons. and Pass) Human Relations: 3 years. 2 'A' level G.C.E. passes. Psychology, Philosophy and Sociology are the main subjects of this course. **B.Sc. Human and Physical Sciences:** 3 years. Specialisation in Psychology, Sociology or Philosophy. 2 G.C.E. 'A' level passes in any subjects. Physics, Chemistry and Mathematics must, however, be passed at 'O' level if not offered at 'A'.

Belfast. B.Sc. Psychology: 3 or 4 years. 2 'A' level passes. Mathematics, Physics, Chemistry and French or German or Russian must be passed at least at 'O' level. **B.A. Psychology:** 3 or 4 years. 2 'A' level G.C.E. passes. **B.A. (Combined Hons.):** 3 or 4 years. 2 'A' level passes; Mathematics must be passed at least at 'O' level. Psychology may be combined with Philosophy.

Birmingham. B.Com.: 3 years. Social Psychology may be taken as a special field of study. 3 'A' level G.C.E. passes (at the same sitting); Mathematics must be passed at least at 'O' level. **B.Soc.Sc.:** 3 years. Social Psychology may be taken as a special

field of study. Entry requirements as B.Com. **B.A. (Combined Hons.):** 3 years. Psychology may be combined with Mathematics; Philosophy; Sociology; Archaeology; Drama; English; French; German; Greek (Ancient or Modern); Italian; Latin; Music; Physical Education; Russian; Spanish; History; or Theology. Social Psychology may be combined with Economics; Political Science; or Sociology. Entry requirements are 3 'A' level G.C.E. passes. For courses including mathematical subjects one of these passes should be in an approved mathematical subject. **B.Soc.Sc. (Combined Hons.):** 3 years. Social Psychology may be combined with Sociology; Economic History; or Political Science. 3 'A' level G.C.E. passes; Mathematics must be passed at least at 'O' level.

Birmingham C.A.T. B.Sc. Behavioural Science: Psychology, Economics and Sociology. 4 years. 2 'A' level G.C.E. passes. Mathematics must be passed at 'O' level if not at 'A'.

Bristol. B.Sc. Psychology: 3 years. 2 'A' level G.C.E. passes in science subjects; Mathematics or a third science subject should be passed at 'O' level. **B.Sc. (Combined Hons.):** Psychology may be combined with Philosophy. 3 years. 2 'A' level G.C.E. passes.

Brunel College. B.Tech.: 4 years. 2 'A' level G.C.E. passes. Mathematics must be passed at least at 'O' level.

Cambridge. B.A.(Hons. and Pass): Part I of the Tripos may be taken in Experimental Psychology, Part II in Psychology. 3 years. 2 'A' level G.C.E. passes plus the general University requirements.

Durham. B.Sc. Psychology: 3 years. 2 or 3 'A' level G.C.E. passes. **B.A. Psychology:** 3 years. 2 'A' level G.C.E. passes. **B.A. (Combined Hons.):** Psychology may be combined with Economics or Philosophy. 3 years. 2 'A' level G.C.E. passes. Latin or Greek or Mathematics must be passed at 'O' level for the Philosophy-Psychology course. **B.Sc. (Combined Hons.):** Psychology may be combined with Zoology. 3 years. 2 or 3 'A' level G.C.E. passes (one of which must be Biology or Zoology and one, preferably, Chemistry or an approved mathematical subject).

Edinburgh. M.A. Psychology: 4 years. 3 'A' level G.C.E. or S.C.E. passes or 2 at good grades. **B.Sc. Psychology:** 4 years. 3 'A' level G.C.E. or S.C.E. passes including Physics and Chemistry and either Zoology or Biology. Mathematics must be passed at least at 'O' level.

Exeter. B.Sc. Psychology: 3 years. G.C.E. 'A' level passes in 2 of the following subjects: Pure and Applied Mathematics (single subject), Physics, Zoology, Biology. Mathematics must be

passed at least at 'O' level. **B.A. Psychology:** 3 years. 2 'A' level G.C.E. passes. **B.Sc. (Combined Hons.):** Psychology may be combined with Pure Mathematics, Mathematical Statistics, Zoology, or Physics. 3 years. 3 'A' level G.C.E. passes including one in an approved mathematical subject for course including Mathematics. For course including Zoology, this subject or Biology must be passed at 'A' level. **B.A. (Combined Hons.):** Psychology may be combined with Philosophy. 3 years. 2 'A' level G.C.E. passes; Latin or Mathematics must be passed at least at 'O' level.

Glasgow. M.A. Psychology: 4 years. 3 'A' level G.C.E. or S.C.E. passes including one in a foreign language. **M.A. (Combined Hons.):** Psychology may be combined with Political Economy, Philosophy, History, Fine Art, or Music. 4 years. 3 'A' level G.C.E. or S.C.E. passes including one in a language other than English.

Hull. B.A. Psychology: 3 years. 3 'A' level G.C.E. passes. **B.Sc. Psychology:** 3 years. 3 'A' level G.C.E. passes. **B.A. (Joint Hons.):** Psychology may be combined with Philosophy, Zoology. 3 years. 3 'A' level G.C.E. passes. **B.Sc. (Joint Hons.):** Psychology may be combined with Zoology. 3 years. 3 'A' level G.C.E. passes including Chemistry and either Biology or Zoology.

Keele. B.A.: Psychology may be taken as one of 2 principal subjects. 4 years. 2 'A' level G.C.E. passes.

Leeds. B.Sc. Psychology: 4 years. 'A' level G.C.E. passes in 2 of the following subjects: Pure and Applied Mathematics (single subject) or Mathematics for Science, Physics, Chemistry, Zoology, Biology. Mathematics must be passed at least at 'O' level. **B.A. (Combined Hons.):** Psychology may be combined with Sociology. 3 years. 2 'A' level G.C.E. passes, preferably in Mathematics and History. Mathematics must be passed at least at 'O' level. **B.Sc. (Combined Hons.):** Psychology may be combined with Zoology or Statistics. 3 or 4 years. 2 or 3 'A' level G.C.E. passes. For course including Statistics an approved mathematical subject must, and Physics should preferably, be passed at 'A' level. For the 3-year course these passes are essential. For course including Zoology the 'A' level subjects should preferably be chosen from Chemistry, Biology, Zoology, Physics. For the 3-year course the passes must be in Chemistry, Physics and either Biology or Zoology.

Leicester. B.A. Psychology: 3 years. 3 'A' level G.C.E. passes (exceptionally good candidates may be admitted with 2 'A' levels). **B.Sc. Psychology:** 3 years. Entry requirements as for B.A.

Liverpool. B.A. Psychology: 3 years. Preferably 3 'A' level G.C.E. passes. Mathematics, Latin or Greek must be passed at 'O' level. **B.Sc. Psychology:** 3 or 4 years (depending on 'A' level grades). 3 'A' level G.C.E. passes including 2 subjects from: Pure and Applied Mathematics or Pure Mathematics or Pure Mathematics with Statistics or Mathematics for Science; Physics; Botany. The third subject should preferably be Zoology or Biology. Either Zoology or Biology must be passed at 'O' level if one of these subjects is not offered at 'A' level. **B.A. (Combined Hons.):** Psychology may be combined with Mathematics. 3 years. 2 or 3 'A' level G.C.E. passes (including one in an approved mathematical subject).

London (Bedford). B.A. Psychology: 3 years. 2 'A' level G.C.E. passes. 2 foreign languages, of which one is classical, must be passed at 'O' level. **B.Sc. Psychology:** 3 years. 2 'A' level G.C.E. passes in science subjects. 'O' level passes in English Language or Literature, Mathematics and a foreign language are desirable. **B.A. (Joint Hons.):** Psychology may be combined with Philosophy. 3 years. 2 'A' level G.C.E. passes. 2 foreign languages including one classical must be passed at least at 'O' level.

London (Birkbeck). B.A. Psychology: 4 years. 2 'A' level G.C.E. passes. 2 foreign languages, of which one is classical, must be passed at 'O' level. **B.Sc. Psychology:** 4 years. 2 'A' level G.C.E. passes in science subjects. **B.A. (Joint Hons.):** 4 years. 2 'A' level G.C.E. passes. 2 foreign languages including one classical must be passed at least at 'O' level.

London (University College). B.A. Psychology: 3 years. 2 'A' level G.C.E. passes. 2 foreign languages, of which one is classical, must be passed at 'O' level. **B.Sc. Psychology:** 3 years. 2 'A' level G.C.E. passes in science subjects. **B.A. (Joint Hons.):** Psychology may be combined with Philosophy. 3 years. 2 'A' level G.C.E. passes. 2 foreign languages, of which one is classical, must be passed at least at 'O' level.

Manchester. B.A. Psychology: 3 years. 3 'A' level G.C.E. passes. Mathematics must, and Biology and Physics should if possible, be passed at least at 'O' level. **B.Sc. Psychology:** 3 years. 3 'A' level G.C.E. passes of which 2 must be science subjects. Mathematics and Chemistry must be passed at least at 'O' level. **B.Sc. (Combined Hons.):** Psychology may be combined with Zoology, Pharmacology, Physiology. 3 years. 3 'A' level G.C.E. passes. For course including Zoology these must include either Biology or Zoology and an approved mathematical subject or Chemistry.

Newcastle. B.A. (Combined Hons.): Psychology may be combined with Philosophy. 3 years. 2 'A' level G.C.E. passes.

Nottingham. B.A. Psychology: 3 years. 2 'A' level G.C.E. passes. Mathematics must be passed at least at 'O' level. **B.Sc. Psychology:** 3 years. 2 'A' level G.C.E. passes in science subjects. These must either include Pure and Applied Mathematics (single subject), or Chemistry and either Zoology or Biology. **B.Sc. (Joint Hons.):** Physiology and Psychology. 3 years. 2 'A' level G.C.E. passes.

Oxford. B.A. (Hons. and Pass): The first and second public examinations may be taken in Psychology, Philosophy and Physiology. 3 years. 2 'A' level G.C.E. passes plus the general University requirements.

Reading. B.A. Psychology: 3 years. 2 'A' level G.C.E. passes. Mathematics must, and Biology should preferably, be passed at least at 'O' level. **B.Sc. Psychology:** 3 years. 2 'A' level G.C.E. passes either including Physics and Pure and Applied Mathematics (single subject) or Pure Mathematics; or including Chemistry and Zoology or Biology with an 'O' level pass in Mathematics. **B.A. (Combined Hons.):** Psychology may be combined with Economics. 3 years. 2 'A' level G.C.E. passes; Mathematics must be passed at least at 'O' level.

Sheffield. B.A. Psychology: 3 years. 2 or 3 'A' level G.C.E. passes. Some knowledge of Biology is helpful. **B.A.(Econ.) Psychology:** 3 years. Entry requirements as for B.A. **B.Sc. Psychology:** 3 years. 3 'A' level G.C.E. passes in science subjects. **B.A.(Econ.) (Combined Hons.):** Psychology may be combined with Pure Mathematics and Statistics; Philosophy; Sociology and Philosophy; or Sociology. 3 years. 2 or 3 'A' level G.C.E. passes including Pure Mathematics for course including Mathematics.

Southampton. B.Sc.(Soc.Sci.) Psychology: Psychology can also be read with Sociology or Statistics. 3 years. 2 'A' level G.C.E. passes. **B.Sc.(Soc.Sci.) (Combined Hons.):** Psychology may be combined with Sociology or Statistics. 3 years. 2 'A' level G.C.E. passes. For course including Statistics, Pure and Applied Mathematics (single subject) must be passed at 'A' level.

St. Andrews. M.A. (Joint Hons.): Psychology may be combined with Economics; Mathematics; Philosophy; Statistics; Geography; or Political Science. 4 years. 2 'A' level G.C.E. or S.C.E. passes. An approved mathematical subject must be passed at 'A' level for course including Mathematics or Statistics.

Strathclyde. B.A. Psychology: 4 years. 2 'A' level G.C.E.

or S.C.E. passes. Exemption from one year of the course may be granted for 3 good 'A' level passes in appropriate subjects. **B.A. (Combined Hons.):** Psychology may be combined with Economics or Sociology. 4 years. Entry requirements as for B.A.

Sussex. B.Sc. Psychology: 3 years. 2 'A' level G.C.E. passes in a science subject chosen from Pure and Applied Mathematics (single subject) or another approved mathematical subject, Physics and Chemistry. **B.A. Psychology:** 3 years. 2 'A' level G.C.E. passes.

Wales (Bangor). B.A. Psychology: 3 years. 2 or 3 'A' level G.C.E. passes. Mathematics should preferably be passed at least at 'O' level. **B.Sc. Psychology:** 3 years. Entry requirements as for B.A. **B.A. (Combined Hons.):** Psychology may be combined with Philosophy. 3 years. Entry requirements as for B.A. **B.Sc. (Combined Hons.):** Psychology may be combined with Philosophy. 3 years. Entry requirements as for B.A.

Wales (Cardiff). B.Sc. Psychology: 3 years. 2 'A' level G.C.E. passes in science subjects, one being a mathematical subject, Physics, Zoology or Biology at a high standard. **B.Sc. (Econ.) Psychology:** 3 years. 2 'A' level G.C.E. passes; a pass in Mathematics at 'O' level is desirable. **B.A. Psychology:** 3 years. Entry requirements as for B.Sc.(Econ.). **B.Sc. (Combined Hons.):** Psychology may be combined with Pure Mathematics; Applied Mathematics; Zoology; Physics. 3 years. 3 'A' level G.C.E. passes including Pure Mathematics for course including Mathematics. For course including Zoology this subject and an approved mathematical subject must be passed at 'A' level. **B.A. (Combined Hons.):** Psychology may be combined with Philosophy. 3 years. 2 'A' level G.C.E. passes. An 'O' level pass in Mathematics is desirable.

Wales (Swansea). B.A. Psychology: 3 years. 2 'A' level G.C.E. passes. **B.Sc. Psychology:** 3 years. 2 'A' level G.C.E. passes. **B.Sc. (Econ.):** Psychology may be taken as part of this degree. 3 years. 2 'A' level G.C.E. passes.

Welsh C.A.T. B.Sc.Tech. Psychology or Occupational Psychology: 4 years. 2 'A' level G.C.E. passes. Mathematics must be passed at least at 'O' level.

(ii) HIGHER DEGREES

The above universities which offer first degree courses in Psychology may admit students to read for higher degrees, in most cases M.A., M.Sc. or Ph.D. Courses for higher degrees in Psychology are dealt with in the next section.

POSTGRADUATE PROFESSIONAL TRAINING

The following universities award postgraduate professional qualifications.

(i) CLINICAL PSYCHOLOGY

Belfast. M.A. or M.Sc.: 2-year postgraduate course. Entry requirement Honours degree in Psychology.

Edinburgh. Diploma in Clinical Psychology: 2-year course. Entry requirement Honours degree in Psychology (1st or 2nd class).

Glasgow. Diploma in Clinical Psychology: 2-year course. Entry requirements: Honours degree in Psychology (1st or 2nd class).

Liverpool. Diploma in Applied Psychology (clinical): 2-year course. Entry requirement: Honours degree in Psychology.

London (Institute of Psychiatry). Academic Postgraduate Diploma in Psychology (Abnormal Section): 13-month course. Entry requirements: Honours degree in Psychology (2nd class) of London University, or an equivalent qualification. **M.A. or M.Sc. in Abnormal Psychology:** 2-year course. Entry requirements: B.A. or Special B.Sc. (2nd class Hons.) degree in Psychology of London University or an equivalent qualification.

Newcastle. Diploma in Clinical Psychology: 2-year course. Entry requirements: Honours degree in Psychology.

Tavistock Clinic and Tavistock Institute of Human Relations (London, W.1) Clinical Psychology Course (accepted by the Whitley Council, N.H.S.): 2-year course. Entry requirements: Honours degree in Psychology.

(ii) EDUCATIONAL PSYCHOLOGY

Aberdeen. Ed.B.: 2 years. Entry requirements: university degree and either Diploma in Education or 3 years' teaching experience.

Belfast. B.Ed.(Psychol.): 2-year course. Entry requirement: university degree in Arts or Science.

Birmingham (Institute of Education). Diploma in Educational Psychology: 11-month course. Entry requirements: Honours degree in Psychology and 3 years' teaching experience.

Edinburgh. B.Ed.: 3-year course. Entry requirement: university degree.

Glasgow. Ed.B.: 3-year course. Entry requirement: university degree and teacher training (may be taken concurrently).

Glasgow. Diploma in Educational Psychology: 2-year

course. Entry requirement: Ed.B. or B.Ed. degree or Honours degree in Psychology and teacher training. In either case teaching experience is required.

Leicester. Diploma in the Sociology and Psychology of Education: 1-year course. Entry requirement: a university degree and teaching experience.

London (University College). Academic Postgraduate Diploma in Psychology (Section B, Educational): 1-year course. Entry requirement: Honours degree in Psychology and 2 years' teaching experience.

Manchester. Diploma in Educational Psychology (Child Guidance): 1-year course. Entry requirements: Honours degree in Psychology or a degree plus teaching experience.

Wales (Swansea). Diploma in Educational Psychology (awarded by the college): 1-year course. Entry requirement: Honours degree in Psychology and 2 years' teaching experience.
Diploma in Education and Diploma in Educational Psychology: 4-year integrated course. Entry requirement: Honours degree in Psychology.

The Tavistock Clinic (London, W.1) Course in Educational Psychology (recognised by the Department of Education and Science): 1-year course. Entry requirement: Honours degree in Psychology and 3 years' teaching experience.

Child Guidance Training Centre (London, N.W.3) Course in Educational Psychology (recognised by the Department of Education and Science): 1-year course. Entry requirement: Honours degree in Psychology and teaching experience.

(iii) OCCUPATIONAL PSYCHOLOGY

Liverpool. Diploma in Applied Psychology (Occupational): 1-year course. Entry requirement: Honours degree in Psychology.

London (Birkbeck College): M.A., M.Sc. or Ph.D. course in Occupational Psychology: Courses are 2 years full-time and 3 years part-time for M.A. or M.Sc.; 4 years for Ph.D. Entry requirement: Honours degree in Psychology. Qualifying examination for graduates in other subjects.

(iv) SOCIAL PSYCHOLOGY

London (Bedford College). Academic Postgraduate Diploma in Psychology (Section A, Social): 1-year course. Entry requirement: Honours degree in Psychology.

(v) DELINQUENCY

Liverpool. Diploma in Applied Psychology (Delinquency):

2-year course. Entry requirement: Honours degree in Psychology.

(vi) CHILD PSYCHOLOGY

Birmingham. Diploma in the Psychology of Childhood: 1-year course. Entry requirement: university degree or other approved qualification.

(vii) CERTIFICATE COURSE

Glasgow. Certificate in Psychology: 1-year course.

PUBLIC ADMINISTRATION

The Royal Institute of Public Administration (24, Park Crescent, London, W.1) is not an examining body.

UNIVERSITY DEGREES AND DIPLOMAS

(i) FIRST DEGREES

Manchester. B.A.(Admin.) (Hons.): Public Administration may be taken as a subject for this degree. 4 years. 2 G.C.E. 'A' level passes. This degree may be taken by 4 years' attendance at evening classes.

Strathclyde. B.A.(Hons. or Ord.) (School of Business and Administration): Public Administration may be read as one of two principal subjects. 4 years. 2 'A' level G.C.E. or S.C.E. passes.

(ii) UNIVERSITY DIPLOMAS AND CERTIFICATES

Birmingham: Diploma in Public Administration. 1-year course for graduates in any faculty and established public servants. (From 1965 granted to overseas candidates only.)

Edinburgh: Certificate in Public Administration. 2-year course for those whose educational standard is equivalent to that of university entrance.

Exeter: Diploma in Public Administration (D.P.A.). 2-year course. Advanced Diploma in Public Administration (Grad. D.P.A.). 1-year course.

Glasgow: Diploma in Public Administration (D.P.A.). 3-year course.

Hull: Diploma in Public Administration. 3-year part-time course.

Liverpool: Diploma in Public Administration (Dipl.P.A.). 3-year course.

London: Academic Diploma in Public Administration. 2-year postgraduate course. External Postgraduate Diploma in Public Administration. 2-year course.

Manchester: Diploma in Public Administration. 1-year postgraduate course.

Newcastle: Diploma in Public Administration. 2-year course.

Oxford: Diploma in Public and Social Administration. Taken after a minimum of 1 year's study.

PUBLIC CLEANSING

The Institute of Public Cleansing

28, Portland Place, London, W.1

(i) CORPORATE MEMBERSHIP

Fellow (F.Inst.P.C.). Fellowship is an honour conferred by the General Council on ordinary Members of at least 10 years' standing who have rendered distinguished service in the field of Public Cleansing.

Member (M.Inst.P.C.). Associate Members of three years' standing may apply for transfer to full Membership.

Associate Member (A.M.Inst.P.C.). Associate Membership is open to those who have passed the Institute's Testamur examination and have had at least three years' experience in Public Cleansing.

(ii) NON-CORPORATE MEMBERSHIP

Associate (Assoc.Inst.P.C.). An Associate is one who is employed in this work but does not qualify for Corporate Membership.

Honorary Fellow (Hon.F.Inst.P.C.). This form of membership is conferred on people prominent in public life, who have taken an interest in the Institute's work, and on presidents of foreign cleansing associations.

Retired Member.

Students of the Institute are those studying for the Testamur examination.

(iii) EXAMINATION

The Testamur Certificate of the Institute. This Certificate, together with three years' qualifying service, makes a candidate eligible for Associate Membership of the Institute.

For entry to the examination candidates must either hold G.C.E. 'O' level (or equivalent) passes in three subjects including English Language and Mathematics or have taken a recognised course of instruction in Public Cleansing.

The examination may be taken in two sittings provided that two or more parts are taken at the first sitting. The examination is written and oral and takes the following form:

Part I: A, General Administration and Accounting; B, Law as related to the public cleansing services; C, Personnel Management and Public Relations; D, Materials and Storekeeping.

Part II: A, Refuse—Composition and Storage; B, Refuse Collection; C, Street Cleansing; D, Weather Emergencies.

Part III: A, general principles of Refuse Disposal and Salvage Utilisation; B, Separation, Incineration and transfer loading; C, Composting, Pulverisation; D, disposal on land.

Part IV: A, Mechanical Engineering; B, Electrical Engineering; C, Automobile and earth-moving plant Engineering; D, workshops and depots.

Exemptions are granted to holders of the following qualifications:

Part I—A: The Intermediate or Final examinations of a recognised accountancy or secretarial body; The Diploma in Public Administration; The Diploma in Municipal Administration.

Part I—C: Diploma of the British Institute of Management.

Part IV—A and B: A National Certificate in Mechanical or Electrical Engineering.

Part-time study courses are available at the following institutions:
Aberdeen Commercial College; Ashton-under-Lyne Technical College; Bradford Technical College; Coatbridge Technical College (Scotland); Durham Technical College; Hackney Technical College; Riversdale Technical College, Aigburth, Liverpool; Nottingham and District Technical College; Sheffield Technical College.

PUBLIC SUPPLIES**The Institute of Public Supplies**

24, Park Crescent, London, W.1

Fellow (F.Inst.P.S.). Any member may apply to be considered for election to Fellowship, which is awarded by a Selection Committee with regard to the candidate's seniority, experience, academic and professional qualification, contributions to the Institute, research or publications. (**F.Inst.P.S.(Dip.)**). A member selected for Fellowship who holds the Institute's Diploma may use these designatory letters.

Members (M.Inst.P.S.) must be at least 26 years old, have worked on the administrative staff of the supplies department of a public, or similar, authority for at least five years and have passed or been exempted from the examinations of the Institute. Members who have passed and have been awarded the Diploma may use the style **M.Inst.P.S.(Dip.)**.

Associates (A.Inst.P.S.) must be at least 23 years old and must be on the administrative staff of the supplies department of a public, or similar, authority. (Candidates who have passed the Intermediate Examination of the Institute may, if they fulfil these requirements, apply for Associateship.)

Registered Students must be at least 16 years old and must undertake to sit for the Institute's examinations within seven years. The Institute also admits public authorities and similar organisations to corporate membership.

EXAMINATIONS

The Diploma of the Institute is awarded to candidates who are successful in the Final Examination of the Institute and have passed or been exempted from the Intermediate. Candidates for the Institute's Intermediate and Final Examinations must be Students, Associates or Members of the Institute (i.e. members accepted before the examination requirement for membership was introduced). Candidates for the Intermediate must study for at least one year; for the Final, two years. Normally at least two subjects must be presented at any one examination.

The Intermediate Examination consists of papers on Public Administration; English; Elements of Accounts; Commercial Geography; Economics; office organisation. Candidates successful in this examination may, if they satisfy the other requirements, apply for Associateship of the Institute.

Total exemption from the Intermediate is granted to university graduates and holders of the final examination of the Institute of Chartered Accountants, the Association of Certified and Corporate Accountants, the Institute of Cost and Works Accountants, the Chartered Institute of Secretaries, and the Institute of Hospital Administrators. Subject-for-subject exemption may also be granted to holders of G.C.E. 'A' level or O.N.C. credit level passes.

The Final Examination takes the form of papers on Public Supplies—practice and principles of buying and selling; Stores, Accounting and Provisioning for the public services; supplies organisations in public bodies; Law of Contract and sale of goods; General Management principles and Personnel Management; Store-keeping practice and principles. Successful candidates are awarded the Institute's Diploma and may, if they satisfy the other requirements, apply for Membership of the Institute.

No exemptions are granted from the Final examination.

PURCHASING

The Purchasing Officers' Association

York House, Westminster Bridge Road, London, S.E.1

Members (M.P.O.A.) should have been directors of a purchasing department or have held a post of comparable seniority for at least five years. They must have passed or obtained an exemption from the Association's examinations, although exceptions may be made for outstanding merits. Candidates must be at least 28 years old.

Associate Members (A.M.P.O.A.) must have held a responsible position in purchasing for at least three years. They should also either have passed the Association's examinations or submit a treatise or other evidence of their professional knowledge. Candidates who qualify by treatise must also hold a recognised degree or professional qualification and have three additional years' experience in Purchasing, or they must have had six years' executive experience, or they must have 10 additional years' experience in a purchasing department or in similar work. In any case the Associate Member must be at least 25 years old.

Graduate. A person who has passed the Association's examinations (*see below*) but has not had sufficient experience to be eligible for other grades of membership may apply for admission to this grade.

A Registered Student is one who is studying for the Association's examinations.

EXAMINATIONS

Qualifying examinations. The Association does not conduct its own examinations at Intermediate level, but instead requires candidates to pass other prescribed examinations: either the H.N.C. in Business Studies or the Graduate Examination of the British Institute of Management or the Scottish Senior Commercial Certificate.

H.N.C. in Business Studies (*see above* in Commerce).

Direct entry to this course is normally restricted to students who have two 'A' level G.C.E. passes.

O.N.C. in Business Studies plus one year of the H.N.C. 2-year course. This method is intended for younger students who have four G.C.E. 'O' level passes including English language.

The Graduate Examinations of the British Institute of Management. This method is for people studying by correspondence course. The British Institute of Management is to discontinue its Graduateship Examination (*see above*, Management) but the Purchasing Officers' Association will continue the courses, administering them directly. This method will, therefore, continue to exist.

The Scottish Senior Commercial Certificate (*see above*, Commerce), entrance requirements for which are normally four S.C.E. or G.C.E. 'O' level passes including English. The S.S.C.C. should preferably cover English (compulsory), Accounting, Statistics, economic organisation and costing.

Complete Intermediate exemption is also granted to university graduates and holders of the Final qualification of certain approved professional bodies.

The Final Diploma Examination covers Purchasing — principles and practice, Raw Materials (economic and geographical survey), Storage and Control of Stock, legal aspects of Purchasing, and transport aspects of Purchasing. In certain subjects, exemption from the Final Examinations may be granted for success in similar examinations.

The Certificate in Storekeeping of the Association. These examinations are open to anyone engaged in Storekeeping. Part-time and correspondence courses are available, and study is normally for one year. The examinations consist of papers on the Nature of Management and the Storage and Control of Stock. Candidates for this certificate are not eligible for Student Registration. A

register of holders is maintained by the Association and they are classified as 'certificated storekeepers'.

QUARRYING

The Institute of Quarrying
62-64, Baker Street, London, W.1

(i) CORPORATE MEMBERSHIP

Fellows (F.I.Q.) are Full Members who have been elected by the Council, either for outstanding service to the Institute or for an original contribution to the science or practice of Quarrying, submitted in the form of a thesis.

Full Members (M.I.Q.) must be at least 30 years of age and have met the Associate Membership requirements of the Institute. In addition, they must be engaged in the quarrying industry and have had at least 10 years' experience in it, including five years in managerial charge. (There are special provisions for Inspectors of Mines or Quarries applying for Membership.)

Associate Members (A.M.I.Q.) must be at least 25 years of age and have passed the Associate Membership Examination, or gained exemption from it. In addition, they must be engaged in Quarrying and have completed a period of training and experience, which includes not less than three years in a position of responsible charge.

(ii) NON-CORPORATE MEMBERSHIP

Honorary Members (Hon.M.I.Q.) are persons recognised by the Council as meriting distinction in view of their services to or their eminent position in the quarrying industry.

Graduates must be at least 21 years of age and have reached an approved standard of technical qualification, including C.G.L.I. Certificate (Subject No. 253), an O.N.C. in Engineering, and have had at least three years' experience in Quarrying. Candidates holding exempting qualifications from the Associate Membership examination may be elected Graduates after one year's experience in Quarrying. Candidates at least 25 years of age may be elected if they have had at least five years in a position of responsibility in Quarrying, without technical qualification.

Students must be at least 16 years of age, have had an approved secondary education, and be preparing for Associate Membership or Graduateship.

Affiliates must be at least 25 years of age and engaged in an occupation within but ancillary to Quarrying, and hold a recognised professional qualification or have reached a position of recognised status.

Associates must be at least 25 years of age and be engaged in an occupation outside Quarrying but closely allied to it and hold a professional qualification or reached a position of recognised status.

(iii) EXAMINATIONS

The Associate Membership Examination consists of two parts, each comprising two papers. Exempting qualifications include degrees in Engineering of approved universities; Associateship of the Royal School of Mines; H.N.C. in engineering; C.G.L.I. Certificate (Subject No. 254).

The only recognised course of instruction is conducted at the Grantham College of Further Education.

UNIVERSITY DEGREE

A course leading to a **B.Sc. Honours** degree in Quarrying is to be offered by the University of Wales (Cardiff).

CITY AND GUILDS OF LONDON INSTITUTE EXAMINATIONS

The C.G.L.I. holds examinations for the following:

Iron Ore Operative's Course (Subject No. 196)

Iron Ore Quarrying Certificate (Subject No. 197)

Iron Ore Quarrying Advanced Certificate (Subject No. 198)

Sand, Gravel and Quarrying Operative's Certificate (Subject No. 252)

Sand, Gravel and Quarrying Certificate (Subject No. 253)

Sand, Gravel and Quarrying Advanced Certificate (Subject No. 254).

RADIOGRAPHY

See note on State Registration, page 790.

The Society of Radiographers

32, Welbeck Street, London, W.1

Fellow (F.S.R.(R)) or (F.S.R.(T)). Members of the Society of five years' standing may take an advanced examination in Radio-

graphy or Radiotherapy for Fellowship. The examination includes papers on Anatomy and Physiology, Physics, Equipment and Photography or Radiation Physics, and an oral test.

Members (M.S.R.(R)) and (M.S.R.(T)) are persons who have obtained the Diagnostic Diploma (R) or the Therapeutic Diploma (T) of the Society.

THE SOCIETY'S EXAMINATIONS

The examinations for the Diploma qualifications are taken after a two-year full-time course. Part I, common to both (R) and (T) above, is taken after the first year. Students must be at least 19 years old before taking this examination, which covers Physics, hospital practice and care of the patient, and Anatomy and Physiology.

Part II is taken after the second year. For the Diagnostic Diploma the examination subjects are: Equipment, Radiographic Photography, Radiographic Technique and a viva voce; for the Therapeutic Diploma: Radiotherapy Physics and Equipment, Radiotherapy Technique and a viva voce. A certified record of practical work is also required. This is integrated with the course.

For registration as a student, a candidate must have passed either:

- (i) G.C.E. 'O' level in Mathematics, English Language or English Literature and any two of Physics, Chemistry, Physics with Chemistry, General Science, Additional General Science, Biology, Elementary Physiology, Health Science or any similar subject; or
- (ii) G.C.E. 'O' level in Mathematics, English Language or Literature and any three other subjects; or
- (iii) S.C.E. Ordinary Grade in English, Mathematics and two science subjects; or
- (iv) S.C.E. Ordinary Grade in English, Mathematics and any three other subjects; or
- (v) a comparable examination.

Many hospital training schools prefer students who have followed a mathematics and science course after the age of 16 years. Courses leading to the Diplomas are offered at many hospitals all over the United Kingdom.

Teaching qualification of the Society of Radiographers. This examination may be taken by Members who have undergone a course of part-time study. Fellows of the Society are eligible for a Teacher's Endorsement to their Diploma on passing this examination or any other teacher qualifying examination approved by the Society.

REMEDIAL GYMNASTICS

See note on State Registration, page 790.

The Society of Remedial Gymnasts

Secretary, General Hospital, Northampton

Fellowship (F.S.R.G.) is awarded for distinguished service in the profession.

Membership (M.S.R.G.) is awarded after a full-time course taken at the School of Remedial Gymnastics and Recreational Therapy (Pinderfields General Hospital, Wakefield, Yorkshire). Three courses are available:

- (i) For students of at least 17 years who have G.C.E. or S.C.E. at 'O' level in four subjects including English. This is a two-year course followed by one year's practical work.
- (ii) A shortened (six-month) course for professional physical educationists.
- (iii) A twelve-month course for Forces physical training instructors who have considerable experience.

All courses cover Physiology, Anatomy, Gymnastics, treatment of the elderly and Clinical Practice.

RESORT PUBLICITY

Association of Resort Publicity Officers

Information Centre, Marine Parade, Margate

The Association is not an examining body. Its aims include studying the 'best methods of developing and making known the tourist facilities of the various localities of Great Britain and Ireland'. There are two grades of Membership.

Full Members must have had five years' experience in Advertising, Publicity or Public Relations work, and must hold a Diploma of the Advertising Association or the Institute of Practitioners in Advertising, and must be employed by a national or local authority as a senior publicity officer. This position must be called Advertising, Publicity or Public Relations Officer.

Associate Members are Resort Publicity Officers who do not

fulfil the conditions for Full Membership. Deputy Resort Publicity Officers or those holding an equivalent office are also eligible for election to Associate Membership.

RETAIL DISTRIBUTION

The Booksellers' Association

14, Buckingham Palace Gardens, London, S.W.1

Membership of the Association is by subscription not by examination.

The Diploma in Bookselling is taken after a course of part-time study, which lasts for three years. Candidates must have had at least two years' experience in a bookshop in membership with the Association; overseas candidates must have had five years' experience selling books in the English language.

To qualify for the Diploma candidates must hold six of the following **Certificates** awarded by the Association:

History of English Literature; Bookshop Practice; Development of English Literature; Bibliography; 20th Century English Literature; Bookshop Management; Applied Bibliography.

Graduates in English literature may obtain exemption from the three literature certificates. Candidates who obtain two literature and two trade subject certificates with distinction have the words 'with Honours' added to their Diploma.

Students must have followed a course of part-time study approved by the Association and must be at least 17 years old. There are no preliminary educational requirements.

National Association of Retail Furnishers

17, Berners Street, London, W.1

National Furnishing Diploma. The course for this Diploma, taken part-time over a period of not less than two years, is designed to provide advanced specialist study for those who have taken the National Retail Distribution Certificate (which, with Furniture as the main commodity subject, may give exemption from Part A of the Diploma) or to be an alternative to the N.R.D.C. course (*see below*).

There are no preliminary educational requirements for entry to the Diploma Examinations. These consist of: Part A, Furniture I—Upholstery, Beds and Bedding, Furnishing Fabrics and Soft Furnishing, Floor Coverings; Part B, Furniture II, Interior Decoration, Selling and Display.

The College for the Distributive Trades' full-time one-year course for a College Certificate for the Furniture and Furnishing Trade (*see below*) gives complete exemption from Parts A and B of the National Furnishing Diploma.

National Association of Goldsmiths

St. Dunstan's House, Covey Lane, London, E.C.2

The Diploma for Retail Jewellers is taken after a two-year correspondence course run by the Association. The Preliminary examination is taken after one year and successful candidates go on to take the Diploma. The Preliminary examination is theoretical; the Final includes theoretical and practical and oral tests. The syllabus covers Jewellery Merchandise and Materials, Gemstones, Hall Marks, Horology, Salesmanship and business subjects.

The Grocers' Institute

50, Doughty Street, London, W.C.1

Honorary Fellows (Hon.F.G.I.) are elected by the Council of the Institute for one year, but may be re-elected annually.

Fellows (F.G.I.) are elected by the Council in recognition of distinguished accomplishments in the Institute's work.

Associate Fellows (A.F.G.I.) are also elected by the Council. No qualifying examination is required and membership of this class is composed of those who hold responsible management positions in the Grocery Trade.

Master Members (M.M.G.I.) are elected from the class of Members. They must have passed the examinations for the Institute's Master Membership Certificate, which is open only to those who hold the Membership Certificate.

Member (M.G.I.). Membership is open only to those who have passed the examination for the Institute's Membership Certificate, which is taken usually after one year's part-time study.

Associates (A.G.I.) must have obtained the Associateship Certificate of the Institute, the examinations for which are taken at the end of one year's part-time study.

Corporation Members are accepted companies carrying out business in the Grocery Trade.

THE INSTITUTE'S EXAMINATIONS

The Grocers' Institute has two introductory courses, the Preliminary and the Intermediate, which do not qualify for membership status.

The Preliminary Certificate examination, which covers Elements of Retailing, Merchandise, Calculations and English, may be taken by beginners in the trade, normally after one year's part-time study.

The Intermediate Certificate examination is of a much higher standard. Candidates must have the Preliminary Certificate of the Institute; or the Retail Trades Junior Certificate (*see below*); or G.C.E. 'O' level passes in three subjects, or C.S.E. Grade I passes in three subjects; or at least a year's experience in the trade. The subjects covered are Organisation of Distribution, English, Product Groups and Trade Calculations. The period of part-time study required is normally one year. Part-time study for all the Institute's courses can be undertaken by post or at local classes in technical and other colleges.

Associateship Certificate Examinations. Candidates for these examinations must hold one of the following qualifications: the Institute's Intermediate Examination Certificate; two years' experience in a responsible position in the trade; two G.C.E. 'A' level passes. The examination covers Organisation of Distribution, English, Product Groups, Calculations and Accounts, and Law. An oral and practical test is also taken.

Membership Certificate Examination. Candidates for the examination must normally hold one of the following qualifications: the Associateship Certificate of the Institute; the National Retail Distribution or an equivalent Certificate. The examination covers Marketing and Economics. The course demands a high standard of ability and pre-supposes that the candidate has considerable trade experience.

The Master Membership Certificate is taken after part-time study normally lasting one year. The examination takes the form of four papers—two on Principles and Practice of Management, one on Management Accounts and Statistics and one on Personnel Management.

The National Institute of Hardware

22, Harborne Road, Birmingham, 15

Fellows (F.N.I.H.) must have passed the examinations of the Institute, have been Members for at least five years and have held a responsible position in the trade for at least five years.

Members (M.N.I.H.(Dip.)) must have passed the examinations of the Institute, reached the age of 25 and worked in the trade for at least five years. In exceptional cases, when Membership is granted without examination, the suffix Dip. is not used.

Associates (A.N.I.H.) are those who have passed the examinations of the Institute but have not completed the five years' experience in the trade required for Membership or who have not reached the age of 25.

Student Members are those studying for the Institute's examinations.

EXAMINATIONS

The Final Examination must be passed to qualify for all grades of membership.

The Preliminary Examination consists of two papers. There are no age limits for entry. Exemption from this examination may be granted to candidates who are at least 19 years old and have been in the trade for three years or more. A Certificate is awarded for success.

The Intermediate Examination may be taken only by students who have passed or obtained exemption from the Preliminary. It consists of two written papers. A Diploma is awarded (classified as Distinction, Credit or Pass) to successful candidates. Commercial Arithmetic, Weights and Measures, Salesmanship and Merchandise are covered in the syllabus.

The Final Examination is taken in two parts — Part I after one year's study and Part II a year later; an oral test is also taken. Candidates must have passed the Intermediate Examination. Diplomas endorsed with Distinction, Credit or Pass are granted to successful candidates. The examination covers Merchandise of all kinds, Law, Buying and Sales Techniques.

The Tool Specialist Examination, for specialists in the tool trade, is held every three years. It is supplementary to the Final Examination.

Residential and other courses are organised by the Institute.

The British Horological Institute
35, Northampton Square, London, E.C.1

Membership (M.B.H.I.) is open without examination to retailers and others whose principal business is the distribution or manufacture of clocks. Fellowship of the Institute is open only to

those who have qualified by examination and experience — normally on the manufacturing side. *See* separate section on Horology.

Institute of Meat

Bristol House, 19-20, Holborn Viaduct, London, E.C.1

The Institute's examination structure, revised in 1965, is as follows.

Meat Trades Basic Certificate (corresponding to the former Craftsman's Certificate). This is designed to give school-leavers an introduction to the trade with some revision of English and Calculations. The examination covers Commodity, Elementary Science, Calculations and English; a practical test is also given. There are two levels of pass: those obtaining the higher level would go on to the Final Certificate course, others to the Craftsman's course.

The Craftsman's Certificate demands the very highest standards of craft attainment. Applicants must work in the meat trade and hold the Basic Certificate. Although the age of entry to the course is normally 18, candidates over 23 who have had continuous trade experience will be considered. The examination takes the form of a paper on the commodity and a practical test.

Meat Trades Final Certificate (replacing the former Diploma). The course for this certificate should give the basic knowledge necessary for management of retail shops and comparable establishments.

For entry to the examinations, candidates must have passed the Meat Trades Basic Certificate; or hold G.C.E. 'O' level passes in English, Mathematics and one science subject; or have passed the Institute's former Craftsman's Certificate examination.

The examination consists of papers on: Commodity, Hygiene and Meat Inspection, General Scientific Principles, Accounts, Business Organisation, and a practical test.

Advanced Certificate in Meat Technology (an expanded version of the former Higher Certificate). This certificate can lead to appointments in factory supervision or management, meat technology, research, and teaching. For entry to the examination, candidates must have passed the Meat Trades Final Certificate.

Applications will also be considered from candidates not engaged in the meat industry but with a relevant background. The examination is in three compulsory subjects and one optional subject. The compulsory subjects are: Meat Production; Management; Anatomy, Physiology and Hygiene. The optional subjects are: Food Microbiology, Preservation and Hygiene; Food Chemistry and

Nutrition; meat factory and abattoir operation. There is a practical test for meat inspectors only.

Endorsements to Advanced Certificates may be taken by candidates who have passed the Advanced Certificate in Meat Technology in any one of the optional subjects described in the above certificate.

Students for these qualifications are advised to register as apprentices under the National Apprenticeship Scheme for the Retail Meat and Pork Butchery Trades.

The Photographic Dealers' Association

46, Bloomsbury Street, London, W.C.1

Membership of this Association is open to all photographic dealers. Associate membership is open to assistants who have obtained the Association's Diploma.

Certificate and Diploma Examinations of the Association. These examinations are taken after study, normally by correspondence course, by assistants working in the retail photographic trade. The examinations are taken in two stages, Preliminary and Final, each consisting of oral salesmanship, practical and written tests. Exemption from the written and practical part of the Preliminary examination will be granted to candidates who have passed an Intermediate Photography Examination of a recognised body.

Candidates successful in the Preliminary are awarded a Certificate, and in the Final a Diploma. The Diploma makes its holder eligible for Associate Membership of the Association.

The Stationers' Association of Great Britain and Ireland

6, Wimpole Street, London, W.1

The Intermediate Grade Examination of the Association is taken by indentured apprentices in the stationery trade at the end of the third year of their four-year period of articles. Study is by day-release or evening class tuition or by correspondence course run by the Association. The indenture of the successful candidate is endorsed by the Council with a **Certificate of Competence**.

Advanced Grade Examination of the Stationers' Association. This is the final qualification for apprentices in the trade. Two years' further part-time study is required after the Intermediate Grade is passed, so that students normally sit for this

examination in the year after the end of their apprenticeship. The indenture of the successful journeyman is endorsed by the Council with a **Certificate of Qualification**.

United Commercial Travellers' Association of Great Britain and Ireland (Incorporated)

Queen's House, 180-182, Tottenham Court Road, London, W.1

Membership of the Commercial Travellers' Association is open to all those employed as commercial travellers or manufacturers' agents. Graduateship is available to those who hold the Association's Salesmanship Diploma but who are not yet employed as commercial travellers.

The Diploma in Salesmanship is taken after a period of part-time study. Entrants must be at least 18 years old, and must register as students before taking the examination; registration is valid for four years. Until May 1967 the examination will be in two Parts, I and II, covering all aspects of selling and the background to distribution. From May 1967 the two parts will be a Preliminary examination in English, from which exemption will be given to candidates with an 'O' level G.C.E. (or equivalent) pass in English Language, and a Final examination covering Salesmanship and Sales Organisation.

The parts of the examination may be taken in successive years.

The Co-operative Union Ltd.

Education Department, Stamford Hall, Loughborough,
Leicestershire

The qualifications awarded by the Union can all be taken after part-time study in local classes or by correspondence course. The Diploma in Co-operation, the Certificate and Diploma in Co-operation and Diploma with Honours (adapted for overseas students), the Certificate in Departmental Management, the Diploma in Co-operative Management, and the Intermediate and Final courses of the Diploma in Co-operative Secretaryship may all be taken also at the Co-operative College, Stamford Hall. There are no time limits for completing the courses of study for any of the Union's awards.

Diploma in Co-operation (C.D.) and Diploma in Co-operation with Honours (C.H.D.). The standard of this qualification is comparable with that of a university diploma. The examination is taken in three parts; completion of Parts I and II

entitles a student to the Diploma. Part I covers the History and Organisation of the Co-operative Movement; English; Economic and Social History; Economics; Social Psychology; British Political Institutions. Part II includes Economics of Co-operation; Co-operative Law; International Co-operation; and the Ideals and Principles of Co-operation. Part III, qualifying for the Honours Diploma, consists of a thesis on research undertaken by the student.

Certificate in Salesmanship. Candidates for entry to the course will normally be at least 16 years of age. Part I: Shop Practice and Commodities; Business Calculations or Co-operation. Part II: Salesmanship and Commodities; Co-operation, Stage I or Business Calculations.

Certificate in Branch Management. Candidates for entry to the subject of Branch Organisation must either (a) hold the group Certificate in Salesmanship, or (b) be at least 21 years of age. Candidates who have held the position of First Assistant, or a higher position, for not less than two years will be given exemption in the subject Salesmanship and Commodities; the subjects of the examination are Salesmanship and Commodities; Branch Organisation; Human Relations in Branch Management; Co-operative Book-keeping, Stage I (Management); and Co-operation, Stage I.

Certificate in Departmental Management. Candidates for entry to the subject of Departmental Organisation must either hold the Certificate in Branch Management or have been departmental managers for not less than two complete trading years; the subjects are Departmental Organisation; Co-operative Book-keeping, Stage II; Economics and Commercial Law (Management); History and Organisation of the Co-operative Movement.

Diploma in Co-operative Management (C.M.D.). Candidates for entry to the subject of Management—Principles and Practice must hold the Certificate in Departmental Management or the Diploma in Co-operative Secretaryship; the subjects are Management—Principles and Practice; Co-operative Book-keeping, Stage III; Co-operative Finance; Economics of Co-operation; Industrial Law.

Co-operative Diploma in Wholesale Textile Distribution. This course consists of the following two elements:

- (i) Wholesale Textile Distribution. Students must undertake the examinations set by the City and Guilds of London Institute in the Intermediate and Final Papers of Wholesale Textile Distribution.
- (ii) Co-operative Subjects. History and Organisation of the Co-operative Movement, Economics of Co-operation.

Certificate in Commerce. Candidates for entry to the course will normally be at least 16 years of age. Younger students may be required to study English and/or Commercial Geography.

Part I: Commerce; Co-operative Book-keeping, Stage I (Secretaryship); Co-operation, Stage II.

Part II: Commerce; Co-operative Book-keeping, Stage II.

Diploma in Co-operative Secretaryship (C.S.D.), Intermediate Course. Candidates for entry to the Intermediate Course must be at least 18 years of age and have passed in Co-operative Book-keeping, Stage II, or have reached an equivalent standard.

Part I: English (Advanced); Co-operative Book-keeping, Stage III; Economics; History and Organisation of the Co-operative Movement.

Part II: Secretarial Practice; General Principles of Law; Co-operative Finance.

A group certificate is awarded for the completion of the Intermediate Course.

Diploma in Co-operative Secretaryship (C.S.D.), Final Course. Candidates for entry to the Final Course must first have passed in all the subjects in the Intermediate course.

Part I: Co-operative Accountancy; Business Statistics; Co-operative Law.

Part II: Economics of Co-operation; Income Tax Law and Practice; Cost Accounting; Commercial Law.

Endorsement of Diplomas in Co-operative Management and Secretaryship. For a holder of the Diploma in Co-operative Secretaryship to secure an endorsement in Management, he will be required to complete the following additional subjects: Management—Principles and Practice; and Industrial Law.

For a holder of the Diploma in Co-operative Management to secure an endorsement in Secretaryship, he will be required to complete the following additional subjects: Secretarial Practice; Co-operative Law; Income Tax Law and Practice; Cost Accounting.

Whilst each endorsement is of considerable value, it does not give an entitlement to the designation C.M.D. or C.S.D.

Royal Society of Health

90, Buckingham Palace Road, London, S.W.1

The Diploma in Food Hygiene is taken after part-time study

by butchers, food traders and abattoir assistants, as well as by stewards in institutions.

The Certificate in the Hygiene of Food Retailing and Catering may be taken after part-time study by workers in catering or in the associated wholesale or retail distribution trades. There is a general section and options in bakery, grocery, ice cream, meat and meat products or milk and milk products.

CITY AND GUILDS OF LONDON INSTITUTE CERTIFICATES

The National Retail Distribution Certificate (N.R.D.C.) is taken normally after two years of part-time study, often in day-release classes at a local technical college. Entrants must have a reasonable standard of education; usually they must have taken a full-time school course until the age of 16 years.

The subjects of the course include English, Calculations, Selling Techniques and one Commodity subject from the following list: Price Goods and Household Textiles; Women's and Girls' Wear; Men's and Boys' Wear; Footwear and Footfitting; Furniture and Furnishings; Hardware, Electrical Goods. In the second year either Display or the Elements of English Law must be taken.

Supplementary commodity or elective subjects may be taken in post-N.R.D.C. studies.

The Certificate in Retail Management Principles is an advanced certificate taken after two years' part-time study. Candidates must be at least 21 years old, have not less than two years' experience in the trade and hold a vocational qualification such as the N.R.D.C. or have been in full-time education up to the age of 18.

The course is in two parts and students may take either part in the first year. Part A covers Retail Accounting; Education and Training; Administration; Communication and Human Relations. Part B covers Work Study; Merchandising; Economics for Retailing; Law for the Retailer.

Wholesale Electrical Distribution. A two-year day-release course is offered by the College for the Distributive Trades in conjunction with the Electrical Wholesalers' Association and the Institute. Prospective students must work in the wholesale electrical trade and be at least 16 years of age. A College examination is held at the end of the first year and an examination of the City and Guilds of London Institute at the end of the second year. The course covers merchandise, business subjects and English.

OTHER C.G.L.I. RETAILING CERTIFICATES

Retail Trades Junior Certificate and **Retail Distributive Trades Junior Course (Scotland)**. These are taken after a two-year part-time course. The Junior Certificate is of a lower standard than the N.R.D.C. The syllabus covers English, Accounting, Retailing Principles, Stock Control and Commodity Studies. Students who reach a good standard in an acceptable commodity subject may be granted exemption from the first year of the N.R.D.C. Other qualifications awarded by the C.G.L.I. are in **Wholesale Textile Distribution (Intermediate and Final)** and in **Solid Fuel Production, Distribution and Utilisation**.

COLLEGE CERTIFICATES

AWARDS OF THE COLLEGE FOR THE DISTRIBUTIVE TRADES: 107, Charing Cross Road, London, W.C.2.

The College Certificate in Retail Distribution is taken after a one-year full-time course at the College. Students must be at least 16 years old and have spent five years in secondary education. Subjects covered are Principles of Retail Distribution, Display, Accounts and a commodity; Fashion, Advertising, oral English and other subjects are also covered.

This is intended to be an introductory course only and students are encouraged to continue their studies part-time for the N.R.D.C. (*see above*) after they have started work.

The College Certificate in Retail Management is taken after a six-month full-time course at the College, which is designed to give people in the trade a working knowledge of retailing principles and practice at middle management level. The course is open to candidates of at least 22 years old who have had two or more years' trade experience and have received further professional or full-time education up to the age of 18 years.

The syllabus of this course is that of the C.G.L.I. Certificate in Retail Management Principles (*see above*) with the additional subjects Promotion (Advertising and Display) and Retail Statistics. Candidates take the C.G.L.I. examinations for that Certificate and gain the College Certificate also if they pass in the additional subjects.

The College Certificate in Retail Studies is taken after a six-month intensive day-release course for students of 18 years and over who hold G.C.E. 'A' level passes in two or more subjects. The subjects of the course include Accounts, Statistics, Retail Distribution, Display, Textiles and Law.

The College Certificate in Textile Distribution is taken

after a one-year full-time course at the College. It is a useful preparation for intending wholesale or retail textile workers, representatives, textile agents or textile laboratory assistants. There are no basic entry requirements.

The Certificate, together with a pass in the College's Analysis and Testing of Textile Materials examination, qualifies a candidate for Licentiatehip of the Textile Institute (*see* section on Textiles). The examination covers Raw Material, Manufacturing, Analysis, Business subjects, Display, Selling and English.

The College Certificate in Fashion Merchandising is taken after a one-year full-time course run in co-operation with the London College of Fashion. Applicants must be at least 17 years old and have passed G.C.E. 'O' level (or equivalent) in at least four subjects including English Language. The course covers all aspects of Fashion Retailing, English and liberal studies.

The College Certificate for the Furniture and Furnishing Trade is taken at the end of a one-year full-time course at the College, suitable either for those about to enter the trade or for experienced workers. Applicants should have been in full-time education up to the age of 16 years.

The course was introduced in collaboration with the National Association of Retail Furnishers and the College Certificate will give exemption from Parts A and B of the Association's Diploma (*see above*). The examination covers many aspects of Furniture Construction, Interior Decoration, Retailing subjects and English.

QUALIFICATIONS OF THE REGIONAL EXAMINING UNIONS

(i) UNION OF LANCASHIRE AND CHESHIRE INSTITUTES

The Certificate in Manufacturing and Retail Fashion is taken after a two-year full-time course. Entrants must be at least 16 years old. The examination covers the Theory and Design of Fashion and a practical test is given. Candidates choose to specialise either on the Manufacturing or on the Retail side. The courses may be taken at a number of local colleges.

(ii) EAST MIDLAND EDUCATIONAL UNION

The Shop Window Display Certificate may be taken after a full- or part-time course. The examination takes the form of written questions on General Display, Colour and Lettering, and a practical test, for which a photograph is required of a display set up by the candidate.

RUBBER TECHNOLOGY

The Institute of the Rubber Industry
4, Kensington Palace Gardens, London, W.8

Fellow (F.I.R.I.). Candidates must normally be at least 30 years of age, have had five years as Associates, and a minimum of 10 years' service in industry. They must hold a position of responsibility and have contributed outstanding service of recognised value to the industry.

Associate (A.I.R.I.). Candidates for Associateship must be 25 years of age and either have passed the Institute's examination or gained exemption from it.

Licentiate (L.I.R.I.) is intended for workers who have entered industry straight from school. It is awarded on completion of a course of study for holders of G.C.E. 'O' level in English, Mathematics, a science and one other subject. The course is of three years' duration part-time or can be completed in one year full-time.

Junior Membership is open to individuals under 25 years of age engaged in approved courses of study or engaged in the industry, who intend to qualify for Licentiate or Associateship. **Ordinary Members** are individuals interested in rubber.

EXAMINATION

The Associateship Examination (which is held jointly with the Plastics Institute) is in four parts. Exemption from Part I is granted to holders of H.N.C. or H.N.D. in Chemistry or Applied Chemistry. Part IV of the examination is in the form of a technical report (Use of English). Members of the Institute of at least one year's standing are admitted without examination if (i) they have gained an approved higher degree in an aspect of Rubber Science or Technology, or the Fellowship of the Royal Institute of Chemistry by examination in Rubber Technology, or (for holders of honours degrees or higher degrees in Physics, Chemistry or Engineering or A.R.I.C., A.Inst.P., A.M.I.E.E., A.M.I.Chem.E., or A.M.I. Struct.E.) (a) evidence of service which has been of recognised benefit to the industry, or (b) a thesis describing original work in Rubber Science or Technology, of type and standard required for an M.Sc. degree of London University.

COLLEGE AWARDS

QUALIFICATIONS AWARDED BY THE NATIONAL COLLEGE OF RUBBER TECHNOLOGY: The Northern Polytechnic, Holloway Road, London, N.7.

Licentiateship of the National College of Rubber Technology (**L.N.C.R.T.**) is obtained on successful conclusion of a one-year full-time course. Candidates must be at least 17 years of age and hold G.C.E. 'O' level passes in English, Mathematics and a science subject, and one other.

Associateship of the National College of Rubber Technology (**A.N.C.R.T.**) is awarded after a three-year full-time course of university first degree standard. Entry requirement is G.C.E. 'A' level in two of Physics, Chemistry and Pure Mathematics. Also awarded after one-year full-time course to holders of approved degree in Chemistry or Physics (Mathematics subsidiary) or Grad.R.I.C., Grad.Inst.P., or to Graduates of the Institute of Plastics. Awards are graded first class, second class, or pass.

Fellowship of the National College of Rubber Technology (**F.N.C.R.T.**) is awarded for a minimum of two years' full-time specialisation or research subsequent to award of A.N.C.R.T. or A.I.R.I. or Graduateship of the Institute of Plastics. Ph.D. graduates of the college are awarded a Fellowship, and M.Sc. graduates can submit M.Sc. thesis or dissertation as part of the work required for Fellowship.

CITY AND GUILDS OF LONDON INSTITUTE EXAMINATION

The C.G.L.I. conducts an examination in Rubber Workshop Practice (Subject No. 120).

SECRETARIAL WORK: SHORTHAND TYPING

Many individual private and local authority secretarial colleges award their own Diplomas to students who successfully complete their courses. Such courses may cover simply the office skills or may include one or more modern languages, commercial background, liberal studies or other subjects. Many of these colleges also prepare their students for the external examinations of nationally recognised bodies.

(Examinations taken only or primarily at school are covered in Part 3, Further Education, page 153; Shorthand typing courses

taken as part of a Business Studies course are covered in Commerce, page 571.)

EXAMINATIONS OF LONDON CHAMBER OF COMMERCE

Private Secretary's Diploma (P.S.Dip.). Candidates for this Diploma must be at least 20 years old. The syllabus covers Secretarial Practice and Office Procedure, General Studies, Meetings, Shorthand/Typing Duties, and the examination involves a series of rigorous tests of the candidate's practical ability, as well as written papers and an interview. Candidates who fail in this Diploma but pass in English and in Shorthand and Typing Duties may be awarded the Chamber's Shorthand/Typist's Diploma. Many commercial colleges offer courses leading to this qualification.

Holders of the Private Secretary's Diploma automatically become members of the Qualified Private Secretaries' Association Ltd., membership of which is restricted to holders of this Diploma.

The Shorthand/Typist's Diploma is made up of the English and Shorthand/Typewriting Duties sections of the Private Secretary's Diploma examination.

The Shorthand/Typist's Certificate (Intermediate) includes papers on English and Shorthand/Typewriting Duties and practical tests. The average speed of dictation is 80 w.p.m.

Single-subject examinations

- (i) **Shorthand including French Shorthand:** Elementary (50 or 60 w.p.m.); Intermediate (70 or 100 w.p.m.); Higher (110 or 150 w.p.m.).
- (ii) **Typewriting:** Elementary (no speed test, accuracy test); Intermediate (includes optional speed test); Higher (includes optional speed test).
- (iii) **Secretarial Practice** (Higher).

The Higher Group Diploma in Secretarial Practice will be granted for a pass with Distinction in Secretarial Practice plus passes in the Commercial Law and Company Law examinations of the Chamber.

EXAMINATIONS OF THE ROYAL SOCIETY OF ARTS

Secretarial Duties Stage II (Intermediate) covering Office Procedure and Organisation, Meetings, Reports, simple Statistics.

Shorthand. Tests are conducted at the following speeds: 50, 60, 80, 100, 120, 140, 150/160 w.p.m.

Shorthand/Typist's Certificates. Stage II (Intermediate): dictation at an average of 80 w.p.m. Stage III (Advanced):

dictation of more difficult passages at an average of 100 w.p.m. Typewriting: Stage I (Elementary): 25 w.p.m. Stage II (Intermediate): 35 w.p.m. Stage III (Advanced): 50 w.p.m.

The Clerk Typist's Group Certificate is awarded to candidates who pass in Typewriting, English and Book-keeping or Arithmetic, or Mathematics, or Commerce or Office Practice.

The Group Certificate in Secretarial Subjects is granted to candidates who pass in the following subjects in any four consecutive series of examination.

Shorthand Typist's Certificate II or III plus Secretarial Duties II.

Typewriting II or III plus English II or III plus Secretarial Duties II.

Shorthand 80 w.p.m. or more, plus English II or III plus Secretarial Duties II.

EXAMINATIONS OF THE REGIONAL EXAMINING BOARDS

(i) EXAMINATIONS OF THE EAST MIDLAND EDUCATIONAL UNION

The following grades are conducted:

Shorthand Examinations:

S.1.—two passages dictated at 40 and 50 w.p.m.

S.2.—two passages dictated at 60 and 70 w.p.m.

S.3.—three passages dictated at 80, 90 and 100 w.p.m.

A.1.—two passages dictated at 110 and 120 w.p.m.

A.2.—two passages dictated at 130 and 140 w.p.m.

Candidates may submit transcripts of both passages.

Typewriting Examinations:

S.1.—20 w.p.m.

S.2.—30 w.p.m.

S.3.—35 w.p.m.

S.4.—50 w.p.m.

(ii) NORTHERN COUNTIES TECHNICAL EXAMINATIONS COUNCIL

The Secretarial Diploma is awarded to candidates who pass examinations in combined Shorthand/Typewriting III and Secretarial Duties in one year (*see below*).

The Audio-typist's Certificate is granted to those who pass the examinations in Audio-typewriting and in English (at least Grade IV).

Single-subject examinations are conducted in the following subjects:

English for Secretaries: covers Reports, Memoranda and Correspondence.

Combined Shorthand/Typewriting:

I 60 w.p.m.

II 80 w.p.m.

III 100 w.p.m.

Secretarial Duties: covers the work of the private secretary and Office Organisation.

Shorthand (Pitman's only):

I Tests at 30 and 40 w.p.m.

II 50 and 60 w.p.m.

III 70 and 80 w.p.m.

IV 90 and 100 w.p.m.

V 110 and 120 w.p.m.

VI 130 and 140 w.p.m.

VII 150 and 160 w.p.m.

Candidates may submit transcripts for both speeds.

Typewriting:

I No speed test.

II Tests at 20 and 25 w.p.m.

III 30 and 35 w.p.m.

IV 40 and 45 w.p.m.

V 50 and 60 w.p.m.

Audio-typewriting:

Dictation at about 80 w.p.m.

(iii) UNION OF EDUCATIONAL INSTITUTIONS

The Shorthand Typist's Course Certificate, awarded in four grades, covers the following subjects (*see* single subjects below):

Grade I: English I; Shorthand I or II; Typewriting I or II.

Grade II: English II; Shorthand II or III; Typewriting II or III.

Grade III: Office Routine and Machinery; Shorthand III or IV; Typewriting III.

Grade IV: Office Organisation and Management; Typing from Shorthand; Shorthand IV.

It is also awarded at an Introductory Grade for passes in the Union's examinations at the Introductory stage in English and two of the following: Calculations and Accounts; Shorthand; Typewriting.

The Clerk Typist's Course Certificate is awarded to candidates who pass examinations in English, Commercial Arithmetic and Typewriting.

Single-subject examinations are conducted in the following subjects:

Shorthand: Introductory Grade. Slow dictation.

Grade I 40 w.p.m.

Grade II Tests at 50 or 60 w.p.m.

Grade III 80 or 100 w.p.m.

Grade IV 120 or 140 w.p.m.

Typewriting: Introductory Grade. No speed test.

Grade I Test at 25 w.p.m.

Grade II 35 w.p.m.

Grade III 50 w.p.m.

Typing from Shorthand: Dictation at about 100 w.p.m.

Transcription 20 w.p.m.

(iv) UNION OF LANCASHIRE AND CHESHIRE INSTITUTES

The Grouped Course Certificate in Office Skills is granted to candidates who pass the Union's examinations in English (Preliminary, I, II or III) or Office Practice together with any grade of Shorthand and Typewriting (*see below*).

Secretarial Diploma. The examination for this includes Diploma papers on Private Secretarial Work and Office Organisation and a test in Shorthand (120-130 w.p.m.) and Typewriting (50 w.p.m.).

Shorthand Typist's Proficiency Certificate. This examination includes a paper on English and a series of tests in Shorthand and Typing. The standard expected is about 60-80 w.p.m. Shorthand and 30 w.p.m. Typewriting.

Audio-typist's Certificate. The examination tests are of English and Typing skill. The speed required is about 30 w.p.m.

Single-subject examinations are conducted in the following subjects:

Shorthand (Pitman's only in Grade I):

I Separate tests at 50 or 60 w.p.m.

II 70 or 80 w.p.m.

III 90 or 100 w.p.m.

IV 112 or 120 w.p.m.

V 130 or 140 w.p.m.

VI 150 or 160 w.p.m.

Typewriting: Preliminary. No speed test.

I Test at 20 w.p.m.

II Test at 30 w.p.m.

III Tests at 35 or 40 w.p.m.

IV Test at 50 w.p.m.

(v) WELSH JOINT EDUCATION COMMITTEE

The General Secretarial Certificate is awarded at three stages for passes in the following single subjects.

Stage I: English; Typewriting I or II with one or both of Book-keeping I and Shorthand I or II.

Stage II: English; Typewriting II or III with one or both of Book-keeping II and Shorthand II or III.

Stage III: Secretarial Work; Typewriting III with one or both of Accounting and Shorthand III or IV.

Certificates of Proficiency in Shorthand or in Typewriting are issued to candidates who pass in these subjects but fail to qualify for the full course Certificate:

Shorthand:

I Tests at 50 or 60 w.p.m.

II 70 or 80 w.p.m.

III 90 or 100 w.p.m.

IV 110 or 120 w.p.m.

NOW—Just 15 weeks to really competent shorthand and typewriting...passport to a better job, better pay, better prospects.

LEARNING TIME SLASHED, EARNING TIME GAINED!

Now . . . you can get set earlier for that better job, that vital promotion . . . can be earning when you would still be learning with other forms of training. Because a Pitmans Intensive Secretarial Course can train you to achieve speeds of up to 100 words a minute shorthand and 40 words a minute typewriting . . . all in just 15 weeks. If you are really keen to get ahead, and would like to be considered for one of these courses, which are currently held at the Central London, Ealing, Bromley and Birmingham Colleges, write or telephone for an Intensive Course prospectus (free).

PITMANS INTENSIVE SECRETARIAL COURSE

pitmans
COLLEGES

CENTRAL LONDON
154 SOUTHAMPTON ROW, W.C.1.
TER 4481. Ext. 71

Typewriting:

I Test at 25 w.p.m.

II Test at 35 w.p.m.

III Test at 50 w.p.m.

Secretarial Work:

III This includes English, Correspondence, Meetings and aspects of Secretarial Procedure.

QUALIFICATIONS AWARDED BY PITMANS COLLEGES

Pitmans (154, Southampton Row, London, W.C.1) conduct the following examinations for full-time and part-time students:

Shorthand speed tests: 80-160 w.p.m. Higher speed tests are held occasionally.

General subject examinations: These are held monthly and in three stages—Elementary, Intermediate and Advanced—in the following subjects:

Advanced Accounts; Business Letters; General Principles of Law; Economics; Office Practice; Mathematics; Geography; Book-keeping; Secretarial Duties; Commerce; English; French; Spanish; German; Handwriting and Spelling; Precis; Private Secretarial Work; Shorthand Theory; Shorthand-typist's Certificate; Typewriting; French Shorthand.

Spoken English examinations are held once a term.

The Pitmans College Diploma is awarded to full-time and part-time students who are at least 16 years old and have passed in five or more subjects in College and public examinations taken while attending the College.

The Higher Secretarial Diploma is granted to students who pass in the following subjects at one examination:

Shorthand-typewriting; Typewriting; English; Secretarial Duties; Business Methods and Correspondence. And one subject chosen from: Elementary Book-keeping; Elements of Economics; General Principles of Law; French; German; Spanish; Italian.

Certificate in Medical Stenography of the Association of Medical Records Officers. This 12-week evening course is run in conjunction with the Association of Medical Records Officers. Intending students must have a good knowledge of Shorthand Theory and a speed of 80 w.p.m. to qualify for admission to the course.

SHIPBROKING

Institute of Chartered Shipbrokers

Baltic Exchange Chambers, 25, Bury Street, London, E.C.3

Fellows (F.I.C.S.) must be at least 30 years old, be a principal or director or hold a responsible position in Shipbroking and have passed or been exempted from the Fellowship Examinations.

Associates (A.I.C.S.) must be at least 21 years old and have, normally, four years' experience in Shipbroking and have passed or gained exemption from Parts I and II of the Associateship Examinations.

Associateship and Fellowship are open to British subjects, citizens of the Republic of Ireland and members of the British Commonwealth.

Honorary Members are persons elected for outstanding services to the profession.

Retired Members are those with less than 25 years' membership.

Life Members are Retired Members with 25 or more years' membership.

EXAMINATIONS

The Associateship Examination is taken in two parts. Part I must be passed before Part II may be attempted. There is no minimum age or educational requirement for entry to Part I, but candidates must work in a shipping office. Subject-for-subject exemption in Part I will be granted to holders of the O.N.C. in Business Studies, the Senior Commercial Certificate (Scotland), the Certificate of Office Studies of the Department of Education and Science and the Intermediate qualifying examination certificates of approved professional bodies. Part I covers Principles of Law, Structure of Commerce, Book-keeping, Accounts and Foreign Exchange and English. For admission to Part II candidates must be at least 19 years old. Part II covers Commercial Geography, Commercial Law, Shipbroking Practice, an oral test in Practical Shipbroking.

The Fellowship Examination is also taken in two parts. Part I is open to those who have passed both parts of the Associateship examination, are working in a shipbroking office and are at least 20 years old. Part I has as its subjects Law of Sea Transport and Marine Insurance. Part II covers the Economics of Sea

Transport and Advanced Shipbroking Practice. Candidates may take the two parts in subsequent years or together.

Study for the examinations is part-time or by correspondence course.

SHIPPING

The Institute of Shipping and Forwarding Agents

16, Park Crescent, London, W.1

Honorary Member. The Council of the Institute may confer Honorary Membership in recognition of outstanding services to the Institute or to the profession.

Fellows (F.S.F.) must have had at least six years' experience as Shipping and Forwarding Agents in the U.K. or in the Commonwealth, including at least one year in a senior executive position. Candidates for election who are under 35 years old must have passed the Institute's examinations.

Associates (A.S.F.) should have had at least three years' experience in Shipping and Forwarding work. Candidates under 35 years old must have passed the Institute's Intermediate and Final examinations.

Student. Anyone over the age of 16 years who is interested in the shipping industry may be accepted for enrolment as a Student and may be admitted to the Institute's examinations. (There are plans to introduce a class of 'Ordinary Member', who will not have to qualify by examination and will not be entitled to any designatory letters.)

QUALIFYING EXAMINATIONS

The Intermediate Examination is taken after a part-time course, available at the colleges listed below. Candidates must have had at least one year's commercial experience before taking the examination which covers: (Part A) Geography; Commerce. (Part B) Transport and Customs Practice, and Elements of Commercial Law. Partial or total exemption from the Intermediate may be granted to candidates who have passed an examination in corresponding subjects of a similar professional body or of a British university.

Part A may be taken before Part B or both may be taken together.

The Final Examination. The subjects of the examination are:

(Part C) Transport and Customs Practice, Air; Law of Cargo, Air; (Part D) Finance of International Trade; Cargo Insurance. Part C may be taken before Part D or both may be taken together. No exemptions are granted from the Final Examination.

COURSES

The following colleges offer courses for these examinations:

Bradford Technical College; College of Commerce, Bristol; Central College of Commerce and Distribution, Glasgow; Hull College of Commerce; City of Liverpool College of Commerce; City of London College (Finals only); Catford College of Commerce; East London College of Commerce (Intermediate only); Thurrock Technical College; Manchester College of Commerce.

SOCIAL SCIENCE

UNIVERSITY DEGREES AND DIPLOMAS

(i) FIRST DEGREES

Honours degrees in Social Science and associated subjects are awarded at the universities listed below, with the course durations and requirements shown. For details of higher and other degrees awarded, refer to the entries under individual universities in Part 4.

Aberdeen. M.A. Sociology: 4 years. 2 G.C.E. 'A' level passes.

Battersea C.T. B.Sc. Human Relations: 3 years. 2 G.C.E. 'A' level passes. **B.Sc. Human and Physical Sciences:** 3 years. 2 G.C.E. 'A' level passes in any subjects, but candidates must have 'O' level passes in Physics, Chemistry and Mathematics if these subjects are not offered at 'A' level.

Birmingham. B.Com.; B.Soc.Sci.: 3 years. 3 G.C.E. 'A' level passes; Mathematics must be passed at 'O' level. Sociology or Social Psychology may be taken as a special field of study in B.Com. and B.Soc.Sci. courses; Social Study may be taken in the B.Soc.Sci. course.

Birmingham C.A.T. B.Sc. Behavioural Science: 4 years. 2 G.C.E. 'A' level passes. Candidates who specialise in Economics should preferably have an 'A' level pass in Pure and Applied

Mathematics (single subject). Candidates must pass Mathematics at 'O' level if not at 'A' level.

Bradford I.T. Honours degree: degree in Administrative and Business Studies and Social Science. 3 or 4 years. 4 years, including one year's practical work, for intending social workers. 2 G.C.E. 'A' level passes. Mathematics is required at 'O' or 'A' level for certain special subjects in the course.

Bristol C.S.T. B.Sc. Sociology: 4 years. 2 G.C.E. 'A' level passes.

Brunel College. B.Tech. Social Sciences: 4 years. 2 G.C.E. 'A' level passes; Mathematics must have been passed at 'O' level.

Cambridge. B.A. Hons.: Sociology is included in an Economics and Politics degree course. 3 years. 2 G.C.E. 'A' level passes. Candidates must satisfy the University's General Requirement.

Durham. B.A.: 3 years. 2 G.C.E. 'A' level passes. Social Theory and Institutions and Social Theory and Administration may each be studied as principal subjects with Economics or Law or Politics.

East Anglia. B.A.: 3 years. 2 G.C.E. 'A' level passes. Mathematics must be passed at least at 'O' level.

Edinburgh. M.A. Sociology: 4 years. 3 G.C.E. 'A' level passes or 2 at good grades.

Essex. B.A.: 3 years. (a) Sociology: 2 G.C.E. 'A' level passes. (This course may last 4 years.) (b) Sociology or Mathematical Social Science: 2 G.C.E. 'A' level passes including any approved mathematical subject. (c) Mathematical Social Science: 3 G.C.E. 'A' level passes, including an approved mathematical subject and either a further mathematical subject or Economics or Physics; Physics must in any case be passed at least at 'O' level.

Exeter. B.A. Sociology: 3 years. 2 G.C.E. 'A' level passes.

Hull. B.A. Social Studies: 3 years. 2 G.C.E. 'A' level passes.

Keele. B.A.: Social Studies may be taken as one of two principal subjects. 4 years. 2 G.C.E. 'A' level passes.

Kent. B.A. Sociology: 3 years. 2 G.C.E. 'A' level passes. Mathematics should be passed at least at 'O' level.

Leeds. B.A. Sociology: 3 years. Preferably 3 G.C.E. 'A' level passes, including Mathematics and History. **B.Sc. (Combined Hons.):** Sociology and Geography. 3 years. 2 G.C.E. 'A' level passes.

Leicester. B.A. in the Social Sciences: special subject, Sociology. 3 years. Normally 3 G.C.E. 'A' level passes.

Liverpool. B.A. Social Science: 3 years. Preferably 3 G.C.E. 'A' level passes; Latin or Greek or Mathematics must be passed at 'O' level.

London (Bedford College). B.A. Sociology: 3 years. 2 G.C.E. 'A' level passes; two foreign languages, of which one must be Latin or Greek, must be passed at 'O' level. **B.Sc.(Soc.) (Sociology):** 3 years. 2 G.C.E. 'A' level passes.

London (London School of Economics). B.A.: in Sociology or Sociology with Social Anthropology. 3 years. 2 G.C.E. 'A' level passes; two foreign languages, of which one must be classical, must be passed at 'O' level. **B.Sc.(Soc.):** in Sociology or Sociology with Social Anthropology or Social Administration and Institutions. 3 years. 2 G.C.E. 'A' level passes. **B.Sc.(Econ.):** Sociology as a special subject in Part II. 3 years. Entry requirements as for L.S.E. B.Sc.(Soc.) *above*.

Loughborough C.T. B.Tech. Humanities and Technology (Social Studies): 4 years. 2 G.C.E. 'A' level passes; Mathematics must be passed at least at 'O' level.

Manchester. B.A.(Econ.) Economics and Social Studies: in Sociology and Social Anthropology, or Social Administration.

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3 years. 2 G.C.E. 'A' level passes. **B.A.(Admin.) Social Administration or Social and Household Science:** 3 years. 2 G.C.E. 'A' level passes.

Newcastle. B.A. Hons.: in Economics and Social Administration or Politics and Social Administration. 3 years. 2 G.C.E. 'A' level passes.

Nottingham. B.A. Sociology or Social Administration: 3 years. 2 G.C.E. 'A' level passes; Mathematics should be passed at least at 'O' level.

Reading. B.A. Sociology: 3 years. 2 G.C.E. 'A' level passes. Sociology may also be taken with Politics, History or Geography in a Combined Subject course. If Geography is taken, Geography must have been passed at 'A' level.

Royal C.A.T. Salford. B.Sc. Social Studies: 3 years. 2 G.C.E. 'A' level passes; Mathematics or a science subject must be passed at least at 'O' level.

Sheffield. B.A.(Econ.) Sociology: 3 years. 2 or 3 G.C.E. 'A' level passes.

Southampton. B.Sc.(Soc.Sci.): Sociology with Commerce; Economics, Law, Philosophy, Politics; Social Administration or Statistics. 3 years. 2 G.C.E. 'A' level passes.

Strathclyde. B.A. Sociology or Social Administration or Industrial Administration: 4 years. 2 G.C.E. 'A' level passes. (Exemption from one year of study may be granted to candidates with three good 'A' level passes in relevant subjects.)

Sussex. B.A. Hons.: 3 years. 2 G.C.E. 'A' level passes, including French or German or Russian or Latin or Greek.

Wales (Aberystwyth). B.Sc.Econ.: Sociology may be taken as a special subject. 3 years. 2 G.C.E. 'A' level passes.

Wales (Cardiff). B.Sc.(Econ.): Sociology or Social Administration or Industrial Relations may be taken as a special subject. 3 years. 2 G.C.E. 'A' level passes; Mathematics at least at 'O' level is desirable.

Wales (Swansea). B.Sc.Econ. Social Studies: 3 years. 2 G.C.E. 'A' level passes.

Warwick. B.A. (Combined Hons.): in Economics and Sociology. 3 years. 2 G.C.E. 'A' level passes; Mathematics must be passed at least at 'O' level.

York. B.A. Sociology: 3 years. 2 G.C.E. 'A' level passes.

(ii) HIGHER DEGREES

Candidates may be admitted to the standard higher degrees (M.A. and Ph.D.) in Social Science subjects and to degrees specifically in Social Science subjects (such as M.Soc.Sc.).

The following universities offer degrees specifically in Social Science subjects:

Birmingham. M.Soc.Sc.: by examination and dissertation or by thesis. **D.Soc.Sc.:** may be conferred 7 years after bachelor's degree.

Birmingham C.A.T. offers a postgraduate course leading to a master's degree in industrial administration.

Brunel College will in future offer **M.Sc.;** **M.Tech.;** and **Ph.D.** courses in Management and Administration and the Social Sciences and Psychology.

Edinburgh. M.Sc.(Soc.Sci.): may be awarded 2 years after bachelor's degree.

Essex offers a one-year formal lecture course leading to **M.A. in Social Administration.**

Leeds has a similar one-year course leading to **M.A. in Sociology.**

Southampton. M.Sc. (Social Sciences): open to graduates 1 or 2 years after bachelor's degree and also exceptionally to non-graduates. **D.Sc. (Social Sciences):** open to Southampton graduates at least 6 years after graduation.

Strathclyde offers a one-year formal lecture course leading to **M.A. in Social Survey Methods.**

(iii) UNIVERSITY DIPLOMAS AND CERTIFICATES

The following universities award qualifications in the Social Science field.

Belfast. Diploma in Social Studies: 2-year course reduced to 1 year for suitably qualified graduates. Diploma can also be taken after a 4-year course, combining it with B.Sc.(Econ.) degree. **Diploma in Applied Social Studies:** 1-year course.

Birmingham. Certificate in Social Studies: 2-year course.

Bristol. Diploma in Social Studies: 1-year postgraduate course. **Certificate in Applied Social Studies:** 1-year course. **Certificate in Residential Work with Children:** 1-year advanced course for staff in children's homes.

Cambridge. Certificates in Social Anthropology and Physical Anthropology: open to members of the University who have been accepted by the faculty board of Archaeology and Anthropology and have received 1 year's instruction from that faculty.

Edinburgh. Diploma in Social Anthropology: 1-year course open to graduates and other qualified persons. **Diploma**

in Social Study: 1-year or longer course open to graduates in approved subjects. **Certificate in Child Care:** 1-year course. Postgraduate or post-Social Study Diploma or Certificate. **Certificate in Medical Social Work:** 1-year course open to graduates and holders of Social Study Diplomas or Certificates who must be over 21 years. **Certificate in Psychiatric Social Work:** 1-year course open to Sociology graduates and holders of a diploma or certificate in Social Studies. **Diploma in Social Study:** 2-year course open to those who have reached university entrance standard.

Exeter. Graduate Certificate in Social Work: 4-term postgraduate course. **Diploma in Social Administration:** 2-year course.

Glasgow. Certificate in Social Study: 2-year course reduced to 1 year for graduates. **Certificate in Sociology:** 1-year course.

Hull. Diploma in Social Studies: 2-year course (may be reduced to 1 year for graduates). **Diploma in Applied Social Studies:** 1-year course.

Leeds. Postgraduate Diploma in Social Studies: 1-year course. **Certificate in Psychiatric Social Work:** 1-year course.

Leicester. Diploma in the Sociology and Psychology of Education: 1-year course for experienced teachers. **Certificate in Applied Social Studies:** 1-year post-credential course.

Liverpool. Diploma in Applied Social Studies: 1 to 2 years depending on entrant's qualifications. Open to graduates, holders of social work qualifications and to experienced social workers. **Certificate in Social Science:** 1- or 2-year course.

London. External Diploma in Social Studies: 2-year course. **Extramural Diploma in Sociology:** 4-year course of evening study. **Diploma in Social Studies (Bedford College):** 1-year postgraduate course. **Diploma in Social Administration (L.S.E.):** 1-year course for graduates, 2 years for others. **Diploma in Economic and Social Administration (L.S.E.):** 1-year course. **Diploma for Social Workers in Mental Health (L.S.E.):** 1-year course. **Diploma in Applied Social Studies (L.S.E.):** 1-year course.

Manchester. Diploma of Advanced Studies in Economic and Social Studies: 1-year postgraduate course. (Industrial Sociology; Public Administration; Social Administration; Social Administration and Social Work; Social Anthropology and Sociology.) **Certificate for Psychiatric Social Workers:** 1-year course.

Nottingham. Diploma in Applied Social Studies: 17-

month course for graduates who have not studied Social Science but wish to work in the field of Child Care or Probation. **Diploma in Political, Economic and Social Studies:** 4 year part-time extramural course for students over 21 years who pass an entrance examination.

Oxford. Diploma in Social and Administrative Studies: 1-year course. Not confined to members of the University.

St. Andrews. Diploma in Social Administration: 1-year postgraduate course. **Diploma in Applied Social Studies:** 1-year course. **Certificate in Social Administration:** 2-year course for non-graduates.

Sheffield. Diploma in Social Studies: 1 to 2 years post-graduate course.

Southampton. Diploma of the University of Southampton (D.U.S.) in Social Studies: 1-year postgraduate course. **Diploma in Applied Social Studies:** 1-year postgraduate course. Candidates who obtain this Diploma may take a further 4-month course in Mental Health for a separate certificate. **Certificate in Social Studies:** 2-year course.

Wales (Cardiff). Diploma in Social Science: 2-year course reduced to 1 year for graduates. **Diploma in Applied Social Studies:** 1-year post-credential course.

Wales (Swansea). Diploma in Applied Social Studies: 1-year course. **Diploma in Social Development and Social Administration:** 1-year course for overseas students. **Diploma in Social Policy and Administration:** 1-year course for overseas students. **Diploma in Youth Leadership and Organisation:** 1-year course. **Diploma in Social Administration:** 2-year course which may be reduced to 1 year for suitably qualified graduates.

OTHER QUALIFICATIONS

- (i) QUALIFICATION AWARDED BY THE COUNCIL FOR TRAINING IN SOCIAL WORK: Clifton House, Euston Road, London, N.W.1.

Certificate in Social Work. Courses are provided in colleges of further education which conduct the examinations for the Certificate; the Council assesses the final papers and fieldwork and awards the Certificate. Candidates are frequently seconded to the courses from local authority health and welfare services and places may be given to those who wish to work in the hospital or child guidance service (although not as medical social workers or psychiatric social workers who qualify by university courses).

Most students who take the courses for the Certificate are employed subsequently as mental welfare officers or social welfare officers. There are three types of course:

Two-year courses: from 1966 the entry requirement for these courses for candidates under 25 years will be G.C.E. passes (or equivalent) in 5 subjects at 'O' level, or in 3 at 'O' and 1 at 'A' level, including English Language subject (or Welsh). Exemption from these requirements will be granted to people appointed to trainee posts before May 1st, 1966 who are seconded to a course. Candidates must be at least 19 and preference is given to those who are 20 and over. The courses cover Study of Human Growth and Behaviour, Social Influences on Behaviour, Social Policy and Administration, the principles and practice of Social Work, Economics and Social History. Theoretical and practical work are combined throughout the course.

One-year and part-time courses: candidates for these courses must be already in a post with local authority health and welfare services, with voluntary organisations or other bodies providing social service. The one-year courses are intended for officers of 35 and over who have had at least 5 years' experience in welfare work. Courses combining one year's full-time and two years' part-time study may be set up in future for officers over 23 who have had at least 5 years' experience in welfare work.

The following colleges offer courses leading to the Certificate in Social Work:

Two-year courses

Birmingham College of Commerce; Bristol College of Commerce; Cardiff College of Commerce; Chiswick Polytechnic; Croydon Technical College; Highbury Technical College, Hants; College of Technology and Art, High Wycombe; Lanchester College of Technology; Leeds College of Commerce; Liverpool College of Commerce; Manchester College of Commerce; Moray House College of Education; Newcastle upon Tyne College of Commerce; North-Western Polytechnic; Nottingham Regional College of Technology; Rupert Stanley College, Belfast; Sheffield College of Technology; South-East Essex College of Technology; The University of Strathclyde (Scottish College of Commerce—no new intakes after 1965).

Courses are also starting in September 1966 at Ipswich Civic College, Jordanhill College of Education, Glasgow, Plymouth College of Technology.

One-year courses

National Institute for Social Work Training (Mary Ward House, 5-7, Tavistock Place, London, W.C.1); Bristol College of Commerce; Cardiff College of Commerce; Liverpool College of Commerce; Manchester College of Commerce; Newcastle College of Commerce.

- (ii) OTHER SOCIAL WORK (requirements in terms of Social Science Diplomas, etc.)

Neighbourhood Work. There are no specific qualifications for this work. People who wish to take it up often take a degree or diploma in Sociology, Social Studies or Social Administration, preferably one which includes study of Community Organisation. Westhill Training College, Birmingham, runs a two-year course for community centre wardens in co-operation with the National Federation of Community Associations (26, Bedford Square, London, W.C.1) and the University of Birmingham Institute of Education.

Family Casework. Family caseworkers must normally hold either a university certificate in Applied Social Studies or the Certificate in Social Work of the Council for Training in Social Work.

SPACE SCIENCE

British Interplanetary Society Ltd.

12, Bessborough Gardens, London, S.W.1

The Society is not a qualifying body and its membership is open to all persons interested in space travel.

Fellows (F.B.I.S.) must be at least 28 years of age and have made considerable contributions to the development of Astronautics or to the Society. In addition they must have either a recognised university degree in Science, Mathematics, Engineering or Medicine, plus five years' relevant scientific, industrial or other professional experience, or Corporate Membership of a recognised professional institution in an appropriate field, e.g. I.Mech.E., I.E.E., R.Ae.S.

Associate Fellows (A.F.B.I.S.) must have, in the case of can-

didates over 25, an examination qualification equivalent to inter-B.Sc., or Ordinary National Certificate, plus five years' relevant scientific, industrial or other professional experience. Or in the case of candidates over 21 either a recognised university degree in Science, Mathematics, Engineering or Medicine, or Graduateship of a recognised professional institution in an appropriate field, e.g. I.Mech.E., I.E.E., R.Ac.S., etc., or Higher National Certificate or an equivalent.

Senior Members are members of the Society of not less than seven years' standing.

Ordinary Members must be at least 16 years of age.

Honorary Fellows have, in recognition of pioneering work in Astronautics, been elected.

UNIVERSITY DIPLOMA

University of London (University College): College Post-graduate Diploma in Space Science. 1-year course.

SPEECH THERAPY

College of Speech Therapists

47, St. John's Wood High Street, London, N.W.8

Fellow (F.C.S.T.). This qualification is awarded to qualified speech therapists of at least five years' standing who submit a dissertation on a subject relevant to speech abnormality.

Diploma of Membership (M.C.S.T.). A Licentiate may, three years after qualifying, choose a special branch of Speech Therapy for advanced study and sit further examinations for the Diploma of Membership of the College.

Licentiate (L.C.S.T.). This qualification is necessary for practice as a speech therapist. To be eligible for admission a candidate must hold the Diploma in Speech Therapy of the College, or the B.Ed. (Speech) degree of Newcastle University (*see below*).

EXAMINATION

The Diploma in Speech Therapy of the College is taken after a three-year full-time course at a recognised training centre. For entry to a training course for the Diploma a candidate must be at

least 18 years old and have passed G.C.E. 'O' level in five subjects including English Language. It is, however, exceptional for anyone to be accepted with the minimum requirements and most students offer two or more 'A' level passes in addition to these; Biology or Zoology, Mathematics, a foreign language, English Literature and Music are all useful subjects.

The examination is taken in two parts. Part I, taken after two years' study, covers Speech Pathology and Therapeutics, the effective use of spoken English (oral examination), Phonetics and Anatomy and Physiology. Part II is made up of papers on Speech Pathology and Therapeutics, Psychology and Neurology. Practical work in hospitals and school clinics is integrated with the course.

The following colleges offer courses leading to the Diploma in Speech Therapy:

The Central School of Speech and Drama (Embassy Theatre, Swiss Cottage, London, N.W.3); The Kingdon-Ward School of Speech Therapy (26, Lower Sloane Street, London, S.W.1); The Oldrey-Fleming School of Speech Therapy (84a, Heath Street, Hampstead, London, N.W.3); The West End Hospital Speech Therapy Training School (59, Portland Place, London, W.1); The Edinburgh School of Speech Therapy (7, Buccleuch Place, Edinburgh, 8); Jordanhill College of Education (The School of Speech Therapy, 25, Athole Gardens, Glasgow, W.2); The Leicester School of Speech Therapy (Delham House, 100, Welford Road, Leicester); Elizabeth Gaskell College (School of Speech Therapy, Hathergaze Road, Manchester, 13).

UNIVERSITY DEGREE AND DIPLOMAS

University of Newcastle. B.Ed.(Speech): this degree is taken after a three-year course, which covers the same curriculum as the training schools described above. For entry to this course two or more 'A' level G.C.E. passes must be offered.

University of Reading. Diploma in the Teaching of Speech Therapy: this course, which started in October 1965, is run by the Institute of Education, Reading University. It is for qualified speech therapists.

University of Manchester. Diploma in Audiology: this is a one-year postgraduate course for intending teachers of the deaf and others; qualified speech therapists are eligible for entry to this course.

STATISTICS

(See also Mathematics, page 786)

The Institute of Statisticians

55, Park Lane, London, W.1

Fellowship (F.I.S.) is granted only by the Council of the Institute. Fellows must be at least 30 years of age and have had at least five years' responsible experience in Statistics. In addition they must have passed Parts III and IV of the Institute's Examination or possess an approved university degree or its equivalent.

Associates (A.I.S.) are not less than 23 years of age and have passed Parts I, II, III and IV of the Examination or possess an approved equivalent university degree or other qualification. In addition, one year's responsible experience in Statistics is required.

Registered Statistical Assistants must not be less than 18 years of age and have passed either Part I or Part II of the Institute's Examination. They must have been employed in the preparation of statistical data or carried out equivalent duties.

UNIVERSITY DEGREES AND DIPLOMAS

(i) FIRST DEGREES

Honours degree courses that include Statistics as a main subject are offered by the universities listed below. The course requirements are either 2 or 3 passes at 'A' level, invariably including Mathematics. For details of higher and other degrees in Statistics see entries for individual universities in Part 4.

Birmingham. B.Soc.Sci. in Mathematics, Economics, Statistics: 3 years.

Bristol. B.Sc. in Economics with Statistics: 3 years.

Exeter. B.A. in Economics and Statistics: **B.Sc.** in Mathematical Statistics and Psychology: 3 years.

Glasgow. M.A. Statistics and Political Economy: 4 years.

Leeds. B.Sc. in Psychology—Statistics: 3 or 4 years.

Liverpool. B.Sc. Mathematical Statistics: 3 or 4 years.

London (L.S.E.). B.Sc.(Econ.) Statistics Part II: 3 years.

London (University College). B.Sc. in Statistics: 3 years.
B.Sc.(Econ.) Statistics with Economics: 3 years.

Sheffield. B.A.(Econ.) in Psychology, Economics and Statistics or in Economics or Geography and Mathematics and Statistics.

Southampton. B.Sc.(Soc.Sci.) in Economics and Statistics or Psychology and Statistics: 3 years.

St. Andrews. M.A. in Psychology and Statistics: 4 years.
Wales (Aberystwyth). B.Sc. Economics with Statistics.

(ii) DIP.TECH., DEGREES OF THE NEW UNIVERSITIES

The following former C.A.T.'s provided courses in Statistics leading to Dip.Tech. These will now lead to degrees of the new universities. The majority require 2 'A' level passes in mathematical subjects of candidates at entry.

Bradford I.T. B.Tech.: 4 years sandwich.

Bristol C.S.T. B.Sc.: 4 years sandwich.

Salford Royal C.A.T. B.Sc.: 4 years sandwich.

Welsh C.A.T. B.Sc.(Tech.): 4 years sandwich.

(iii) UNIVERSITY DIPLOMAS

Postgraduate Diplomas in Statistics are offered at the following universities:

Aberdeen (2 years); London (1 year) (Academic Postgraduate Diploma; D.I.C. at Imperial College); Manchester (1 year); Oxford (1 year; confined to members of the University); Wales (1 year).

SURGICAL AND DENTAL TECHNICIANS

(See also Dental Technicians, page 598)

The Institute of British Surgical Technicians Inc.

21, Tothill Street, London, S.W.1

Fellows (F.I.B.S.T.) are those who have been surgical technicians for 20 years, 10 of which have been in a position of responsibility; or those, having scientific or medical degrees, who have practised as surgical technicians in a position of responsibility for five years; or those, having exceptional surgical or technical knowledge or qualifications, who are elected by existing Fellows.

Licentiates are those over the age of 25 who have been practising as surgical technicians for not less than 10 years and have been recommended by a Fellow; or those who have passed the Institute's Final Examination and are not less than 25; or those who, in the opinion of the Council of the Institute, have exceptional qualifications.

Associateship is granted to those who, in the opinion of the

Council of the Institute, possess the necessary qualifications but who are not yet qualified for a higher grade.

Student Associates. Students who have passed the second year examination may become Student Associates.

EXAMINATIONS

The Institute's Certificate of Proficiency is awarded on application to students who successfully complete a three-year part-time course of instruction. There are three examinations, each held at the end of a year of the course. The subjects of the examinations are as follows:

First Professional Examination: Anatomy, Cell Biology; Physics and Mechanics.

Second Professional Examination: Physiology; Metallurgy and Chemistry.

Third Professional Examination: Pathology and Bacteriology; Principles of Surgery and Surgical Instruments or Principles of Orthopaedic Surgery and Orthopaedics or Principles of Thoracic Surgery and Oxygen Therapeutics.

Intending students should have an adequate G.C.E. The Certificate is awarded at three levels, First Class, Second Class and Pass. A First Class Certificate qualifies the holder to apply for the Licentiate-ship of the Institute; holders of Second Class Certificates are required to attend an interview before being admitted to Licentiate-ship.

A recognised course of instruction is offered at Paddington Technical College.

INSTITUTE OF BRITISH SURGICAL TECHNICIANS INCORPORATED: DENTAL SECTION

Fellows (Dental Section) are Licentiates with 20 years' experience in Dental Technology who either hold the Dental Technician's Advanced Certificate of the City and Guilds of London Institute or have rendered great service to the I.B.S.T. or have contributed to the advancement of knowledge and education in the field of Dental Technology.

Licentiates (Dental Section) must be not less than 25 and have had not less than eight years' experience in Dental Technology. If they are not Associates with exceptional qualifications, they must provide proof of efficiency such as the Dental Technician's Certificate (Final) of the City and Guilds of London Institute.

Associates (Dental Section) must normally be not less than 18

and must hold the Dental Technician's Certificate (Intermediate) of the City and Guilds of London Institute and be engaged on a recognised course of training. Exceptionally, candidates born before 1916, who have served for 25 years continuously in the craft, may be considered for admission to membership, subject to satisfactory recommendation.

SURVEYING AND VALUING

The Royal Institution of Chartered Surveyors

(incorporated 1881)

12, Great George Street, London, S.W.1

Examinations to qualify candidates for membership were started in 1881 and were made compulsory in 1891. Fellows and Professional Associates are Corporate Members of the Institution; Fellows may describe themselves as 'Chartered Surveyors' and so may Professional Associates if, at the same time, they disclose their grade of membership. Probationers and Students, who are non-corporate members, are candidates for qualification and are attached to the Institution for the furtherance of their professional education.

(i) CORPORATE MEMBERSHIP

Fellow (F.R.I.C.S.) must be over 30 and must have passed or been exempted from the Professional Examinations and must have had five years' experience as a surveyor in circumstances satisfactory to the Institution.

Professional Associates (A.R.I.C.S.) must be not less than 21 and must have passed the First (where appropriate), Intermediate and Final Examinations, or the Direct Membership Examination or other acceptable examinations. Candidates must be engaged in professional work approved by the Institution.

Holders of the Cambridge B.A. or the internal London B.Sc. (Estate Management) may be considered for election as Professional Associates without further written examination, or on satisfying the Institution that they are no longer pupils, that they have been for two years and are still engaged in professional work in a branch of the profession related to their degree course and that they have received proper practical training.

Holders of the external London B.Sc. (Estate Management) are required to show that they have had not less than four years'

approved training in that branch of the profession related to their degree course and are professionally engaged in circumstances satisfactory to the Institution.

(ii) NON-CORPORATE MEMBERSHIP

Probationers must have complied with the Institution's minimum academic requirements and have passed the First and Intermediate Examinations or other acceptable examinations; they must be receiving professional training akin to that of Students. Candidates may continue as Probationers until the end of the fifth calendar year after that in which they enrolled.

Students must be at least 17 and have obtained the G.C.E. with specified numbers of passes at 'O' and 'A' levels or the equivalent. For example, three 'A' level and one 'O' level passes (including English and either Mathematics or a science subject), or six 'O' level passes are acceptable, as are several other combinations of 'O' and 'A' level passes.

Candidates must be either pupils or technical assistants in the offices of Chartered Surveyors or of other approved practitioners or be full-time students at an establishment approved by the Council of the Institution. Candidates remain Students until they pass the Intermediate Examination or until the end of the fifth calendar year after that in which they enrolled.

(iii) PROFESSIONAL EXAMINATIONS

The professional examinations of the Institution are divided into the following sections to cover the main branches of the profession: General Section (Valuation; Housing Management; Town and Country Planning; Building Surveying); Agriculture and Land Agency Section; Quantity Surveying Section; Mining Surveying Section; Land Surveying Section (including hydrographic surveying).

With the exception of the Quantity Surveying Section, the examinations consist of either the First, Intermediate and Final Examinations or the Direct Membership Examination. In the Quantity Surveying Section, the examinations are either the Intermediate, Final, Part I, and Final, Part II Examinations or the Direct Membership Examination.

Diploma Examinations. Chartered Surveyors who satisfy the Institution that they have the requisite experience may apply to take Diploma Examinations in Agricultural Practice and Valuation, Forestry and Rating. These examinations are independent of the ordinary professional examinations and are intended for the Chartered Surveyor who wishes to specialise.

Exemptions from the Examinations. The Institution recognises certain degrees, diplomas and other examination successes in geography, estate management and allied subjects as exempting candidates from part of the professional examinations. All candidates must, however, satisfy the requirements as to practical training and experience appropriate to the state of the examinations at which they enter.

(iv) COURSES OF INSTRUCTION

Agriculture and Land Agency Section

First and Intermediate Examinations

Bristol Technical College.

First, Intermediate and Final, Part I Examinations

College of Estate Management; Royal Agricultural College, Cirencester.

General Section

First Examination only

Chichester College of Further Education.

First and Intermediate Examinations

Ewell County Technical College; Glamorgan College of Technology; Heriot-Watt College, Edinburgh; Manchester College of Building; Regent Street Polytechnic; South-East Essex Technical College and School of Art.

First, Intermediate and Final Examinations

Bournemouth Municipal College of Technology and Commerce; Bristol Technical College (full-time and sandwich courses); Brixton School of Building; City of Liverpool College of Building; College of Estate Management; Hammersmith College of Art and Building; Leicester College of Art; The Northern Polytechnic; Sheffield College of Technology; South-West Essex Technical College and School of Art; Willesden Technical College.

Land Surveying Section

First Examination only

The School of Military Surveying (Hermitage, Newbury, Berkshire).

Intermediate Examination only

The Colonial Survey Officers' Course (School of Military Surveying. The school is not open to private students); University College, London.

First and Intermediate Examinations

South-West Essex Technical College.

Quantity Surveying Section

Intermediate and Final, Part I Examinations

Brighton College of Technology; Bournemouth Municipal College of Technology and Commerce; Bristol Technical College (full-time and sandwich courses); Brixton School of Building; College of Estate Management; Glamorgan College of Technology; Ewell County Technical College; Hammersmith College of Art and Building; Heriot-Watt College, Edinburgh; Leeds College of Technology; Leicester College of Art; City of Liverpool College of Building; Manchester College of Building; Medway College of Technology; Charles Trevelyn Technical College, Newcastle; The Northern Polytechnic; Nottingham and District Technical College; Oxford College of Technology; Regent Street Polytechnic; Sheffield College of Technology; South-East Essex Technical College and School of Art; South-West Essex Technical College and School of Art; Stoke-on-Trent College of Building; Willesden Technical College.

The Institute of Quantity Surveyors

(incorporated 1941)

98, Gloucester Place, London, W.1

Membership of the Institute is open only to Quantity Surveyors. To qualify for Membership an applicant must be engaged as principal or assistant with either a Quantity Surveyor or firm of Quantity Surveyors in private practice; a government department, public body, or public utility company; the Quantity Surveying department of an architectural or other professional firm; or the Quantity Surveying department of a company, firm or person, approved by the Institute, carrying on business as a building or public works contractor.

(i) CORPORATE MEMBERSHIP

Fellows (F.I.Q.S.) are Associates who are not less than 35, are, and have been for at least five years, engaged in the work prescribed for Associates as persons in at least managerial or senior and controlling capacity or as principals.

Associates (A.I.Q.S.) are Graduates who have passed the Third Examination, are not less than 21 and are, and have been for at least three years, engaged as assistant Quantity Surveyors and are experienced in taking-off quantities, measuring variations and settling accounts.

(ii) NON-CORPORATE MEMBERSHIP

Graduates are Probationers who have passed the Second Examination and who are in employment as prescribed for Students. Graduates may not remain in the grade for more than three years without special permission.

Probationers are Students who have passed the First Examination and who are in employment as prescribed for Students. Probationers may not remain in the grade for more than three years without special permission.

Student. Candidates must be at least 16 and have five 'O' level G.C.E. passes or five Ordinary grade S.C.E. passes or the equivalent; they may not remain Student members more than five years. Students must be employed in approved offices or attending recognised educational establishments.

(iii) PROFESSIONAL EXAMINATIONS

The Institute's examinations consist of the First Examination, the Second Examination, the Third Examination and the Direct Membership Examination.

The subjects of the examinations are as follows:

First Examination: Building Construction and Draughtmanship, Building Services, Land Surveying and Mensuration, Abstracting and Billing, Economics, Principles and Application of Law.

Second Examination: Building and Civil Engineering Construction, Specifications, Building Services, Quantities, Theory of Structures, Building and Civil Engineering Contracts and Law, Arbitrations and Proofs of Evidence.

Third Examination: Quantities, Variation Accounts and Interim Valuations, Measurement of Civil Engineering Works, Building Economics and Cost Planning, Estimating and Analysis of Prices, Professional Practice and Reports.

Direct Membership Examination: Third Examination subjects and Specifications, Building and Civil Engineering Contracts and Law, Arbitrations and Proofs of Evidence.

Owing to differences in Scottish and Irish law and practice, there are variations to the above in the Scottish and Republic of Ireland Sections.

Courses of direct preparation for the Institute's examinations are provided at the following establishments:

Bristol Technical College: A.I.Q.S. (4 years full-time).
Coatbridge Technical College, Lanarkshire: A.I.Q.S.

- Coventry Technical College: Graduateship (2 years full-time).
- Dundee Technical College: A.I.Q.S.
- Napier Technical College, Edinburgh: A.I.Q.S.
- South-East Essex College of Technology: Graduateship (3 years full-time).
- South-West Essex Technical College: A.I.Q.S. (4 years full-time).
- Glasgow College of Building: A.I.Q.S.
- Liverpool College of Building: A.I.Q.S. (2 years full-time).
A.I.Q.S. (3 years full-time).
- Hammersmith College of Art and Building: A.I.Q.S. (3 years full-time).
- Stoke-on-Trent College of Building: Graduateship (2 years full-time).

The Valuers Institution

(incorporated 1929)

3, Cadogan Gate, London, S.W.1

Among the Institution's objects is that of encouraging and/or securing the better training and qualification of persons contemplating entering the profession of a Valuer, Surveyor, Estate Agent and/or Auctioneer. Fellows and Associates may use the designations 'Incorporated Auctioneer and Estate Agent' and/or 'Incorporated Valuer and Surveyor'.

Fellows (F.V.I.) must have passed the Final or Direct Final examination or an approved equivalent and have been in practice for at least 10 years as principals or managers or in some other professional posts approved by the Institution.

Associates (A.V.I.) must be at least 21, have passed the Final or Direct Final examination or an approved equivalent and have either a minimum of five years' approved professional experience as an employee or a minimum of three years' practice as a principal.

Licentiates must not be less than 18, have passed or been exempted from the Intermediate examination and hold an appointment approved by the Institution.

Students are persons not less than 16 who are occupying or intending to occupy an approved position in the profession.

PROFESSIONAL EXAMINATIONS

The examinations of the Institution are held at **Intermediate**,

Final and **Direct Final** levels in the following subdivisions: General Practice; Agriculture; Building and Quantities; Specialist Categories; Public Officers.

The Rating and Valuation Association

(founded 1882; incorporated 1927)

29, Belgrave Square, London, S.W.1

The Association's qualification in Rating, Valuation and Valuation Appeals offers scope for all whose professional work is concerned with rating, valuation for rating and other purposes, and with the rating appeals procedure.

(i) CORPORATE MEMBERSHIP

Fellow (F.R.V.A.). The requirements for Fellow membership are much the same as those for Associate membership; Fellowship is accorded to those who are principals in private practice or who hold more senior and responsible posts in private and public employment.

Associates (A.R.V.A.) are those engaged in the profession of rating or valuation or any ancillary or allied profession and who have passed the Final examination or been exempted from it.

(ii) NON-CORPORATE MEMBERSHIP

Licentiate membership is open to those qualified to take the Final examination of the Association, having passed or been exempted from the Intermediate.

Student membership is open to those preparing for the Association's examinations and to others who do not intend necessarily to take the examinations but who are nevertheless engaged or about to be engaged in the profession of rating and of valuation or ancillary or auxiliary professions. Students must have four G.C.E. 'O' level passes, including English and Mathematics.

(iii) PROFESSIONAL EXAMINATIONS

The Association conducts examinations at **Intermediate** and **Final** level in three divisions: Rating, Valuation and Valuation Appeals. The examinations conducted for Scottish candidates take account of differences in Scottish law.

Exemptions from the Intermediate and Final examinations in each division may be granted in respect of certain degrees and the examinations of other professional associations.

C.N.A.A. DEGREE

A 4-year sandwich course leading to the **B.Sc. degree in Quantity Surveying** is offered at Sheffield College of Commerce and Technology.

COLLEGE DIPLOMAS

The following colleges offer courses leading to diplomas:

North-East Essex Technical College: College Diploma in Quantity Surveying (2 years full-time).

Leeds College of Technology: College Diploma in Quantity Surveying (3½ years full-time).

Liverpool College of Building: College Diploma in Quantity Surveying (3 years full-time).

Oxford College of Technology: College Diploma in Quantity Surveying (4 years full-time).

TEACHING

INITIAL QUALIFICATIONS IN ENGLAND AND WALES

(i) RECOGNITION

To obtain a permanent teaching appointment in maintained schools in England and Wales, it is necessary to be a **qualified teacher**. In order to be qualified, teachers must either have satisfactorily completed an approved course of initial training or have a special qualification approved by the Secretary of State for Education and Science.

(ii) THE APPROVED COURSES OF TRAINING

Courses of initial training at colleges of education.

Courses of training at the University of London Institute of Education:

(i) Department for Education in Tropical Areas: post-graduate Certificate in Education.

(ii) Course for the postgraduate Certificate in Education with special reference to the teaching of English as a foreign language.

A course of training leading to recognition as a **Certificated Teacher in Scotland.**

A course of training in Northern Ireland leading to **recognition as a teacher in maintained schools in Northern Ireland.**

(iii) THE SPECIAL APPROVED QUALIFICATIONS

Any degree obtained in the United Kingdom and Ireland.

One-year courses of professional training for graduates are provided in university departments of education and in some colleges of education; at present graduates (and holders of the qualifications listed below) are not obliged to train before appointment, but they are strongly advised to do so.

Qualifications accepted by the Secretary of State for the status of qualified teacher when held by teachers who would not otherwise be entitled to this status. These are as follows:

Art

Qualified teacher status is not granted to persons who obtain any of the following after 1965, unless they also have the minimum educational qualifications for admission to a recognised college of education (*see* (vi) *below*).

London University Diploma in Fine Art (Slade School).

Diploma of Associateship of the Royal College of Art (A.R.C.A.).

Certificate of Designer of the Royal College of Art (Cert.Des.R.C.A.).

The Ministry of Education's Certificate in Drawing (discontinued in 1945) or the Intermediate Certificate in Arts and Crafts plus either the Ministry's Certificate (discontinued 1945) in Painting or Modelling or Pictorial Design or Illustration or Industrial Design or the National Diploma in Design (N.D.D.).

Certificate of the Royal Academy Schools awarded on the successful completion of the Academy course.

Diploma in Art and Design (Dip.A.D.).

Handicraft

The City and Guilds of London Institute Teacher's Certificate obtained before 31st December, 1960.

Music

Graduate Diploma of the Birmingham School of Music (G.B.S.M.).

Graduate Diploma of the Guildhall School of Music (G.G.S.M.).

Graduate Diploma of the London College of Music (G.L.C.M.).

Graduate Diploma of the Northern School of Music (G.N.S.M.).

Degree of Master in Music of the Royal College of Music (M.Mus., R.C.M.).

Fellowship of the Royal College of Organists (F.R.C.O.).

Graduate Diploma of the Royal Manchester School of Music (G.R.S.M. (Manchester)).

Graduate Diploma of the Royal Schools of Music (G.R.S.M.).

Graduate Diploma of the Trinity College of Music (G.T.C.L.).

And the following, obtained not later than 1963:

Diploma of the Birmingham and Midland Institute School of Music (now the Birmingham School of Music) at the end of the two-year teacher training course for the A.B.S.M.(T.T.D.) ending in 1947 or later; or the Diploma of A.B.S.M.(Teacher) of any instrument or the voice at the end of the three-year full-time course or a period of part-time study.

The Teaching Certificate of the London School of Dalcroze Eurhythmics on the successful completion of the three-year course ending in 1955 or earlier.

Certificate of the Dalcroze Society (Incorporated) Training Centre awarded on the successful completion of the three-year course ending in 1954 or 1955.

Certificate of the Dalcroze Society (Incorporated) London School of Eurhythmics awarded on the successful completion of the three-year course ending in 1956 or later.

Diploma of Music Education for Schools of Dartington College and Arts Centre.

Associateship or Licentiate of the Guildhall School of Music (A.G.S.M. or L.G.S.M.) with special Teacher's Diploma (Music) or A.G.S.M. or L.G.S.M. Teacher's Diploma or A.G.S.M. or L.G.S.M. Aural Training and Musical Appreciation or A.G.S.M. or L.G.S.M. Class Singing and Voice Training.

Diploma in Music of Huddersfield College of Technology.

Licentiate of the London College of Music, i.e. the Teacher's Diploma in an instrument, or the voice (if obtained not later than 1960) (L.L.C.M.(T.D.)) or L.L.C.M. in School Music.

Associate Diploma in Music Education of the Northern School of Music.

Licentiate of the Royal Academy of Music (L.R.A.M.) Teacher's Diploma (instrumental or otherwise) or L.R.A.M. Aural Training or L.R.A.M. Voice Culture and Class Singing.

Associateship of the Royal College of Music (A.R.C.M.) Teacher's Diploma (instrumental or otherwise).

Associateship of the Royal Manchester College of Music (A.R.M.C.M.) or A.R.M.C.M. (School Music).

Licentiate Teacher's Diploma of Trinity College of Music, L.T.C.L. (instrumental or otherwise) or Fellowship (F.T.C.L.) or Diploma of Music Education for Schools (L.T.C.L.Mus.Ed.).

The Diploma in Music of any College of the University of Wales.

Licentiate (L.R.S.M.) Teacher's Diploma (instrumental or otherwise) of the Royal Schools of Music.

Needlecraft and Domestic Subjects

Two certificates in different needlecraft subjects of the City and Guilds of London Institute, one of which must be a Teacher's Certificate, with normally two years' satisfactory teaching or other suitable experience. (The Course and Diploma of the Royal School of Needlework, now discontinued, may be accepted as suitable experience for this purpose.) The Technical Teacher's Certificate of the City and Guilds of London Institute awarded from 1955 to 1964 and two certificates of the Institute in different needlecraft subjects, one of which must be an advanced certificate, with normally two years' satisfactory teaching or other suitable experience.

The Domestic Subjects (Further Education) Teacher's Certificate of the City and Guilds of London Institute, together with either two certificates of the Institute in different needlecraft subjects, with normally two years' satisfactory experience or other suitable experience or the Institute's Certificate in Advanced Domestic Cookery and Certificate in Housecraft or Home Management with normally two years' satisfactory teaching or other suitable experience.

Science

Associateship of the Royal College of Science (Imperial College, London) (A.R.C.S.).

Graduateship of the Institute of Physics (Grad.Inst.P.).

Graduate Membership of the Royal Institute of Chemistry (G.R.I.C.).

Speech and Drama

(Holders of the following qualifications must have reached a general educational standard suitable for admission to a college of education and have begun their course at not less than 18.)

Teaching Diploma awarded on successful completion of the three-year course at the Central School of Speech Training and Dramatic Art.

The Teaching Diploma in Speech and Drama awarded on successful completion of the three-year course at the Royal Academy of Music.

Teaching Diploma in Speech and Drama awarded on successful completion of the three-year course at the New College of Speech and Drama.

A.G.S.M. Teacher's Diploma in Speech and Drama awarded on successful completion of the three-year course at the Guildhall School of Music and Drama not later than 1959.

The Diploma awarded on successful completion of the three-year course in Speech and Drama conducted by the Rose Bruford Training College of Speech and Drama.

The Teacher's Diploma awarded on successful completion of the three-year full-time course of training in Speech and Drama conducted by the Northern School of Music.

Technology

Higher National Diploma (H.N.D.) with two years' appropriate industrial experience.

Higher National Certificate (H.N.C.) together with five years' appropriate industrial experience acquired after the student has obtained his Ordinary National Certificate (O.N.C.) or equivalent qualification.

Until 30th June, 1966, any Full Technological Certificate of the City and Guilds of London Institute, together with five years' appropriate industrial experience undertaken after study for the qualification has begun and after the age of 21.

Diploma in Technology.

National Froebel Union or Foundation

Certificate A of the National Froebel Union awarded on successful completion of a three-year course.

(iv) PROBATION

The first year of all qualified teachers' service is probationary. If the Secretary of State decides at the end of probation that a teacher is unsuitable for further employment as a qualified teacher, he may not be employed as such.

(v) APPROVED COURSES OF TRAINING IN ENGLAND AND WALES

Most courses of initial teacher training are provided in colleges of education (called teacher training colleges until 1964); others are in university departments of education and art training centres. All the colleges in a particular area are linked in an area training organisation, based on a University Institute of Education. Students are examined by the area training organisation. Successful students are awarded a **Teacher's Certificate** and are recommended to the Secretary of State for qualified teacher status. Most colleges are 'general colleges', their main task being to provide three-year courses for students intending to become general teachers in primary or secondary schools or specialist teachers of certain subjects in secondary schools; older students may take courses lasting less than three years. Some colleges specialise in certain subjects (*see below*). Some colleges offer four-year courses combining professional training and study for a degree of the University of London, on which their area training organisation is

based (*see below*). Four-year combined courses are increasing as more first degrees in Education become available.

(vi) QUALIFICATIONS FOR ADMISSION TO TRAINING

Students entering three-year courses of initial training at colleges of education must be 18 on or before 1st October in the year in which training is to start or on or before 1st February for those college courses which begin in January. Candidates must have at least five G.C.E. 'O' level passes or a School Certificate; or three 'O' level passes and one 'A' level pass in another subject; or two 'O' level passes and two 'A' level passes in other subjects; or three 'A' level passes, together with evidence of having kept up other subjects after 16. The passes should include English Language. C.S.E. Grade 1 passes are accepted as the equivalent of G.C.E. 'O' level passes in the same subjects.

Applications are handled by the Central Register and Clearing House, 151, Gower Street, London, W.C.1.

(vii) AREA TRAINING ORGANISATIONS

The Birmingham University Institute of Education (50, Wellington Road, Birmingham, 15) contains the University of Birmingham Education Department and the following colleges of education:

Anstey College of Physical Education, Sutton Coldfield (Women only; secondary); City of Birmingham Training College, Birmingham, 15 (Men and women); Bordesley Day Training College, Birmingham, 11 (Women only; day students only); City of Coventry College of Education (Men and women); Dudley Training College, Dudley, Worcestershire (Men and women); Hereford College of Education (Women only); Radbrook Training College, Shrewsbury (Women only; secondary Housecraft); St. Paul's Training College, Rugby (Roman Catholic; women only); St. Peter's College, Birmingham, 8 (Church of England; men only); Shenstone College, Bromsgrove, Worcestershire (Men and women); Summerfield College, Kidderminster (Women only); Westhill Training College, Selly Oak, Birmingham (Free Church; men and women); West Midlands College of Education, Walsall, Staffordshire (Men and women); Wolverhampton Teachers' College for Day Students (Men and women; day students only); City of Worcester Training College (Men and women).

The Bristol University Institute of Education (19, Berkeley Square, Bristol, 8) contains the University of Bristol Department of Education and the following colleges of education:

Bath Academy of Art, Corsham Court, Wiltshire (Men and women; secondary); Bath College of Education in Home Economics (Women only; secondary); The Gloucestershire Training College, Gloucester (Women only); Newton Park College (City of Bath), Newton St. Loe, Bath (Women only); Redland College, Bristol, 6 (Men and women); St. Mary's College, Cheltenham (Church of England; women only); College of St. Matthias, Fishponds, Bristol, and Barrow Court, Barrow

Gurney, near Bristol (Church of England; men and women); St. Paul's College, Cheltenham (Church of England; men only); Salisbury Training College (Church of England; women only).

The Cambridge Institute of Education (Shaftesbury Road, Cambridge) contains the University of Cambridge Department of Education and the following colleges of education:

Balls Park Training College, Hertford (Women only); The Training College, Bedford (Women only); Brentwood College of Education, Brentwood, Essex (Men and women; day students only); Hockerill College, Bishop's Stortford, Hertfordshire (Church of England; women only); Homerton College, Cambridge (Undenominational; women only); Norwich Training College (Church of England; men and women); Putteridge Bury College of Education, Luton (Men and women; day students only); Saffron Walden College, Essex (Undenominational; women only); St. Osyth's College, Clacton on Sea, Essex (Men and women); Wall Hall Training College, Watford, Hertfordshire (Women only).

The Durham University Institute of Education (Old Shire Hall, Old Elvet, Durham) contains the University of Durham Education Department and the following colleges of education:

Darlington Training College, Co. Durham (Undenominational; women only); Middlesbrough Day Training College, Yorkshire (Men and women; day students only); Neville's Cross Training College, Durham (Men and women); St. Hilda's College, Durham (Church of England; women only); Sunderland College of Education, Co. Durham (Men and women); The College of the Venerable Bede, Durham (Church of England; men only).

The Exeter University Institute of Education (Gandy Street, Exeter) contains the University of Exeter Education Department and the following colleges of education:

Rolle College, Exmouth (Men and women); St. Luke's College, Exeter (Church of England; men and women).

The Hull University Institute of Education (173, Cottingham Road, Hull) contains the University of Hull Department of Education and the following colleges of education:

Endsleigh College of Education, Hull (Roman Catholic; women only); Kingston-upon-Hull College of Education, Cottingham Road, Hull (Men and women).

The Keele University Institute of Education (Keele, Staffordshire) contains the University of Keele Department of Education and the following colleges of education:

Cheshire College of Education, Alsager, Staffordshire (Men and women); Cheshire College of Education, Crewe (Women only); Madeley College of Education, near Crewe (Men and women).

The Leeds University Institute of Education (The University, Leeds, 2) contains the University of Leeds Department of Education and the following colleges of education:

All Saints College, Leeds, 2 (opening September 1966) (Roman Catholic; men only); Bingley College of Education, Yorkshire (Men and women);

Bretton Hall Training College, near Wakefield (Men and women); Carnegie College of Physical Education, Leeds, 6 (Men only; secondary); Ilkley College of Housecraft (Women only; secondary); The James Graham College, Leeds, 12 (Men and women); City of Leeds Training College, Leeds, 6 (Men and women); Margaret McMillan Memorial College, Bradford, 5 (Women only); North Riding College of Education, Scarborough (Women only); Oastler College, Huddersfield (Men and women); Ripon College, Ripon (Church of England; women only); St. John's College, York (Church of England; men and women); Trinity College, Leeds, 2 (opening September 1966) (Roman Catholic; women only); Yorkshire Training College of Housecraft, Leeds, 1 (Women only; secondary).

The Leicester University School of Education (328, London Road, Leicester) contains the University of Leicester School of Education and the following colleges of education:

City of Leicester College of Education, Leicester (Men and women); Leicester Domestic Science Training College, Leicester (Women only; secondary).

The Liverpool University Institute of Education (1, Abercromby Square, Liverpool, 7) contains the University of Liverpool Department of Education and the following colleges of education:

Chester College, Chester (Church of England; men and women); Christ's College, Liverpool, 16 (Roman Catholic; men and women); Edge Hill College of Education, Ormskirk, Lancashire (Men and women); F. L. Calder College of Domestic Science, Liverpool, 18 (Women only; secondary); I. M. Marsh College of Physical Education, Liverpool, 17 (Women only; secondary); Kirkby Fields College of Education, near Liverpool (Women only); City of Liverpool C. F. Mott College of Education, Prescot, Lancashire (Men and women); Liverpool Day College of Education (Men and women; day students only); Mount Pleasant Training College, Liverpool, 3 (Roman Catholic; women only); St. Katharine's College, Liverpool, 16 (Church of England; men and women).

The London University Institute of Education (Malet Street, London, W.C.1) contains the University of London Institute of Education, King's College Education Department and the following colleges of education:

College of All Saints, London, N.17 (Church of England; men and women); Avery Hill College of Education, London, S.E.9 (Men and women); Battersea Training College (Housecraft Courses), Clapham Common, London, S.W.4 (Women only; secondary); Battersea Training College (General Courses), Roehampton Lane, London, S.W.15 (Men and women); Borough Road College, Isleworth, Middlesex (Undenominational; men and women); Cavendish Square Training College, London, W.1 (Roman Catholic; women only); Christ Church College, Canterbury, Kent (Church of England; men and women); Coloma College, West Wickham, Kent (Roman Catholic; women only); Dartford College of Physical Education, Dartford, Kent (Women only; secondary); Digby Stuart College, London, S.W.15 (Roman Catholic; women only); Froebel Institute College of Education, London, S.W.15 (Undenominational; women only); Furzedown Training College, London, S.W.17 (Men and women); Gipsy Hill Training College,

Kingston-upon-Thames, Surrey (Men and women); Goldsmiths' College Training Department, London, S.E.14 (Undenominational; men and women); Maria Assumpta Training College, London, W.8 (Roman Catholic; women only); Maria Grey College, Twickenham, Middlesex (Women only); Nonington College of Physical Education, Dover, Kent (Women only; secondary); Philippa Fawcett Training College, London, S.W.16 (Men and women); Rachel MacMillan College, London, S.E.8 (Women only); St. Gabriel's College, London, S.E.5 (Church of England; women only); College of St. Mark and St. John, London, S.W.10 (Church of England; men only); St. Mary's College, Strawberry Hill, Twickenham, Middlesex (Roman Catholic; men and women); Shoreditch Training College, Englefield Green, near Egham, Surrey (Men only; secondary); Sidney Webb Day Training College, London, W.1 (Men and women; day students only); Sittingbourne Day College of Education, Kent (Men and women; day students only); Southlands Training College, London, S.W.19 (Methodist; men and women); Stockwell College of Education, Bromley, Kent (Men and women); Trent Park College, Barnet, Hertfordshire (Men and women); White-lands College, London, S.W.15 (Church of England; men and women).

The Manchester University School of Education (The University, Manchester, 13) contains the University of Manchester Department of Education, the University of Manchester Department of Audiology and Education of the Deaf and the following colleges of education:

Charlotte Mason College, Ambleside, Westmorland (Women only); Chorley College of Education, Chorley, Lancashire (Men and women); De la Salle Training College, Middleton, Manchester (Roman Catholic; men only); Didsbury Training College, Manchester, 20 (Men and women); Elizabeth Gaskell College, Manchester, 13 (Women only); Manchester Training College, Manchester, 3 (Men and women); Mather Training College, Manchester, 1 (Men and women); Padgate College of Education, near Warrington, Lancashire (Men and women); Poulton-le-Fylde College of Education, Lancashire (Men and women); St. Martin's College, Bowerham, Lancashire (Church of England; men and women); Sedgley Park Training College, Prestwich, Manchester (Roman Catholic; women only).

The Newcastle upon Tyne University Institute of Education (19, Leazes Terrace, Newcastle upon Tyne, 1) contains the University of Newcastle Department of Education and the following colleges of education:

Alnwick College of Education, The Castle, Alnwick, Northumberland (Women only); Kenton Lodge College, Gosforth, Newcastle (Women only); Newcastle upon Tyne Training College, Newcastle, 1 (Men and women); Northern Counties College, Newcastle, 7 (Men and women); Northumberland College of Education, Newcastle (Men and women); St. Mary's Training College, Fenham, Newcastle, 4 (Roman Catholic; women only).

The Nottingham University Institute of Education (University Park, Nottingham) contains the University of Nottingham Department of Education and the following colleges of education:

Bishop Grosseteste College, Lincoln (Church of England; women only); Diocesan Training College, Derby (Church of England; men and women); Eaton Hall College of Education, Retford, Nottinghamshire

(Women only); Kesteven Training College, Stoke Rochford, Lincolnshire (Men and women); Loughborough Training College, Leicestershire (Men and women; secondary, men; infant and junior, women); Matlock College of Education, Derbyshire (Men and women); Nottingham College of Education, Nottingham (Men and women).

The Oxford University Institute of Education (15, Norham Gardens, Oxford) contains the University of Oxford Department of Education and the following colleges of education:

Culham College, Abingdon, Berkshire (Church of England; men only); Far Bletchley Training College, Wheatley, near Oxford (Women only); Newland Park Training College, Chalfont St. Giles, Buckinghamshire (Men only); North Buckinghamshire Training College, Bletchley (Men only); Westminster College, North Hinksey, Oxford (Methodist; men and women).

The Reading University Institute of Education (The University, Reading) contains the University of Reading Department of Education and the following colleges of education:

Bulmershe Training College, near Reading (Men and women); Easthampstead Park College, Wokingham, Berkshire (Women only).

The Sheffield University Institute of Education (The University, Sheffield, 10) contains the University of Sheffield Department of Education and the following colleges of education:

Doncaster College of Education, Doncaster (Men and women); Lady Mabel College, Wentworth Woodhouse, Rotherham (Women only; secondary); Sheffield City College of Education, Sheffield, 10 (Men and women); Swinton Day Training College, Mexborough (Men and women; day students only); Thornbridge Hall College of Education, near Bakewell, Derbyshire (Women only); Totley Hall College of Education, Sheffield (Women only); Wentworth Castle College of Education, near Barnsley (Women only).

The Southampton University Institute of Education (Southampton) contains the University of Southampton Department of Education and the following colleges of education:

Bognor Regis Training College (Men and women); King Alfred's College, Winchester (Church of England; men and women); La Sainte Union College of Education, Southampton (Roman Catholic; women only); City of Portsmouth College of Education, Portsmouth (Men and women); Weymouth Training College, Weymouth (Women only).

The Sussex University School of Education (Brighton, Sussex). At the time of writing the Sussex School contains the University of Sussex School of Educational Studies and the following colleges of education:

Bishop Otter Memorial College, Chichester, Sussex (Church of England; men and women); Brighton College of Education, Brighton (Men and women); Chelsea College of Physical Education, Eastbourne, Sussex (Women only; secondary); Seaford College of Education, Sussex (Women only; secondary).

The University of Wales School of Education (University Registry, Cathays Park, Cardiff) contains the Education Depart-

ments of the four University Colleges and the following colleges of education:

City of Cardiff College of Education, Cardiff (Men and women); Cartrefle Training College, Wrexham, Denbighshire (Women only); Glamorgan College of Education, Barry (Men and women); Monmouthshire Training College, Newport (Men and women); Normal College, Bangor, Caernarvonshire (Men and women); St. Mary's College, Bangor (Church in Wales; women only); Swansea College of Education, Swansea (Men and women); Training College of Domestic Arts of South Wales and Monmouthshire, Cardiff (Women only; secondary); Trinity College, Carmarthen (Church in Wales; men and women).

(Note: The University of York Department of Education is not a member of an area training organisation.)

(viii) PROFESSIONAL TRAINING FOR GRADUATE TEACHERS

Graduate teachers who wish to train before taking up an appointment may be accepted for a one-year course at any of the university departments of education listed above or at one of the following colleges of education:

Avery Hill College of Education, London, S.E.9; Battersea Training College (Housecraft Courses), London, S.W.4 (for domestic science graduates); Bretton Hall Training College, Wakefield (with special reference to the teaching of drama); Carnegie College of Physical Education, Leeds, 6 (combined with some study of physical education); Cavendish Square Training College, London, W.1; Chelsea College of Physical Education, Eastbourne (combined with some study of physical education); Didsbury Training College, Manchester, 20; The Gloucestershire Training College, Gloucester (for domestic science graduates); Goldsmiths' College Training Department, London, S.E.14; Homerton College, Cambridge; City of Leeds Training College, Leeds, 6; City of Liverpool C. F. Mott College of Education, Prescott, Lancashire; Loughborough Training College, Leicestershire (for men who wish to teach handicraft in addition to their degree subjects); Loughborough Training College, Leicestershire (combined with some study of physical education); Maria Grey College, Twickenham, Middlesex; Neville's Cross Training College, Durham; Newton Park College (City of Bath), Bath (for students holding degrees or diplomas in agriculture or horticulture); Redland College, Bristol; College of St. Mark and St. John, London, S.W.10; St. Hilda's College, Durham; St. Luke's College, Exeter; St. Martin's College, Bowerham, Lancashire; St. Mary's Training College, Fenham, Newcastle, 4; St. Mary's College, Twickenham, Middlesex; St. Peter's College, Birmingham, 8; Sheffield City College of Education, Sheffield, 10; The College of the Venerable Bede, Durham; Westminster College, Oxford; Whitelands College, London, S.W.15; City of Worcester Training College, Worcester (for students holding degrees or diplomas in agriculture or horticulture).

(ix) COURSES OF SPECIALIST TRAINING FOR STUDENTS

The following colleges offer three-year courses for students to train as specialist teachers of certain subjects in secondary schools:

Art: Bretton Hall Training College, near Wakefield; Trent Park College, Barnet.

Commerce: Dudley Training College, Dudley; Kingston-upon-Hull College of Education; Philippa Fawcett Training College, London, S.W.16; Redland College, Bristol; Southlands Training College, London, S.W.19; Swansea College of Education.

Handicraft: Cheshire College of Education, Alsager; De la Salle Training College, Manchester; Goldsmiths' College Training Department, London, S.E.14; King Alfred's College, Winchester; Loughborough Training College, Leicestershire; Monmouthshire Training College, Newport; Redland College, Bristol; St. Peter's College, Birmingham, 8; St. Paul's College, Cheltenham; Sheffield City College of Education, Sheffield, 10; Shoreditch Training College, Egham, Surrey; Trent Park College, Barnet, Hertfordshire; Trinity College, Carmarthen.

Housecraft: College of All Saints, London, N.17; Bath College of Education in Home Economics; Battersea Training College, London, S.W.4; Digby Stuart College, London, S.W.15; Elizabeth Gaskell College, Manchester, 13; F. L. Calder College of Domestic Science, Liverpool, 18; Ilkley College of Housecraft, Ilkley; Leicester Domestic Science Training College; Madeley College of Education, near Crewe; Normal College, Bangor; Northern Counties College, Newcastle, 7; Radbrook Training College, Shrewsbury (this College also offers a three-year course in rural economy for students intending to teach in colleges of further education); Seaford College of Education, Sussex; Sidney Webb Day Training College, London, W.1; St. Osyth's College, Clacton; The Gloucestershire Training College, Gloucester; Totley Hall College of Education, Sheffield; Training College of Domestic Arts for South Wales and Monmouthshire, Cardiff; City of Worcester Training College; Yorkshire Training College of Housecraft, Leeds, 1.

Music: Bretton Hall Training College, Wakefield; Goldsmiths' College Training Department, London, S.E.14 (this is a three-year degree course followed by a one-year course of professional training); Rolle College, Exmouth*; St. Luke's College, Exeter*; Trent Park College, Barnet, Hertfordshire.

(*This course is taken by students who have obtained the Diploma of Music Education in Schools of Dartington College, Totnes, Devon. Candidates for the two-year Diploma course must be at least 18 and normally have five G.C.E. 'O' level passes, or the equivalent.)

Physical Education (Men): Borough Road College, Isleworth; City of Cardiff College of Education; Carnegie College of Physical Education, Leeds, 6; City of Leeds Training College, Leeds, 6; Chester College, Chester; Loughborough Training College, Leicestershire; Madeley College of Education, near Crewe; St. John's College, York; St. Luke's College, Exeter; St. Mary's College, Twickenham; St. Paul's College, Cheltenham.

Physical Education (Women): Anstey College of Physical Education, Sutton Coldfield; Avery Hill College of Education, London, S.E.9; Bedford College of Physical Education, Bedford; Bishop Otter Memorial College, Chichester; Chelsea College of Physical Education, Eastbourne (this College also offers a course in Advanced Dance with some aspects of physical education, one year of which is spent at the Art of Movement Studio, Addlestone); City of Coventry College of Education; Dartford College of Physical Education, Dartford, Kent; Diocesan Training College, Derby; Endsleigh College of Education, Hull; Glamorgan College of Education, Barry; I. M. Marsh College of Physical Education, Liverpool, 17; Lady Mabel College, Yorkshire; Neville's Cross Training College, Durham; Nonington College of Physical Education, Dover, Kent; St. Mary's College, Cheltenham.

Science (combining Biology, Chemistry and Physics): Borough Road College, Isleworth; Didsbury Training College, Manchester, 20;

Dudley Training College, Dudley; Goldsmiths' College Training Department, London, S.E.14; Homerton College, Cambridge; City of Leeds Training College, Leeds, 6; Normal College, Bangor; Nottingham College of Education; City of Portsmouth College of Education; St. John's College, York; St. Luke's College, Exeter; College of St. Mark and St. John, London, S.W.10; St. Mary's College, Cheltenham; St. Paul's College, Cheltenham; Sedgley Park Training College, Manchester; De la Salle Training College, Manchester; The College of the Venerable Bede, Durham; City of Worcester Training College.

Rural Science: Culham College, Abingdon, Berkshire; Newton Park College, Bath; St. John's College, York; Trinity College, Carmarthen; City of Worcester Training College.

(x) COMBINED DEGREE AND PROFESSIONAL TRAINING COURSES

Selected students at Borough Road College, Isleworth, Goldsmiths' College Training Department, London, S.E.14, the College of St. Mark and St. John, London, S.W.10, and St. Mary's College, Strawberry Hill, Twickenham, may take a combined degree and professional training course lasting four years. The degree is awarded by the University of London. At Goldsmiths' College the course consists of a three-year period of study for a degree followed by a one-year course of professional training.

(xi) ART TRAINING CENTRES

The following art training centres, which are associated with colleges of art maintained by local education authorities or with universities, provide one-year courses of initial training (leading to the award of an **Art Teacher's Certificate (A.T.C.)** or **Art Teacher's Diploma (A.T.D.)** for holders of certain advanced qualifications in art:

Birmingham College of Art, Birmingham, 3; Bournemouth and Poole College of Art, Bournemouth, Hampshire; Brighton College of Art, Brighton, 7; School of Teacher Training, West of England College of Art, Bristol, 6; Cardiff College of Art, Cardiff; Department of Teacher Training, Hornsey College of Art and Crafts, London, N.15; Leeds College of Art, Leeds, 2; Leicester College of Art, Leicester; Liverpool College of Art, Liverpool, 1; Goldsmiths' College School of Art, London, S.E.14; University of London Institute of Education, Malet Street, London, W.C.1; Manchester College of Art and Design, Manchester, 15; University of Newcastle Department of Education, Newcastle upon Tyne, 1; University of Reading; Sheffield College of Art, Sheffield, 11; Swansea College of Art, Swansea.

(xii) TECHNICAL TRAINING COLLEGES

The following four colleges specialise in one-year courses of professional training for students with technical qualifications who wish to teach in colleges of further education:

Bolton Technical Training College, Bolton, Lancashire; Garnett College, London, S.W.15; Huddersfield Training College, Huddersfield, Yorkshire; Wolverhampton Technical Teachers' College, Wolverhampton.

(xiii) COURSES OF PROFESSIONAL TRAINING FOR STUDENTS HOLDING SPECIALIST QUALIFICATIONS

The following colleges provide courses of initial training, usually one year in length, for students holding certain specialist qualifications:

Dance and Drama

For students who have passed a two-year course in Dance and Drama at Dartington College of Arts, Totnes, Devon (Diploma of Dance/Drama Education in Schools):

Rolle College, Exmouth; St. Luke's College, Exeter.

(Candidates for the Dartington Diploma must be not less than 18 and normally have five G.C.E. 'O' level passes or the equivalent.)

Handicraft

For male students who already have certain qualifications:

Cheshire College of Education, Alsager; De la Salle Training College, Manchester; Eaton Hall College of Education, Retford, Nottinghamshire; King Alfred's College, Winchester; City of Leeds Training College, Leeds, 6; St. Peter's College, Birmingham, 8.

(These colleges provide courses for holders of the C.G.L.I. Full Technological Certificate, H.N.C. and H.N.D. and to candidates who have passed Part I and Section I of Part II of the Handicraft Teacher's Certificate examination of the C.G.L.I.)

Housecraft

For mature students with experience and qualifications in institutional management:

Bath College of Education in Home Economics, Bath; Madeley College of Education, near Crewe; Yorkshire Training College of Housecraft, Leeds, 1.

Music (Music Teacher's Certificate)

For students who already have certain qualifications in music:

City of Birmingham Training College, Birmingham, 15; Bretton Hall Training College, near Wakefield (also provides courses for instrumentalists); City of Cardiff College of Education; College of St. Mark and St. John, London, S.W.10; Manchester Training College, Manchester, 3; Newton Park College, Bath (also provides courses for instrumentalists); Philippa Fawcett Training College, London, S.W.16; Rolle College, Exmouth; St. Luke's College, Exeter; Trent Park College, Barnet, Hertfordshire (also provides courses for instrumentalists).

For students who have passed a two-year course in music at Dartington College of Arts or Huddersfield Technical College or Cardiff College of Music and Drama:

Rolle College, Exmouth, and St. Luke's College, Exeter, for Dartington students; Bretton Hall Training College, near Wakefield, for Huddersfield students; City of Cardiff College of Education for Cardiff students.

Physical Education (Women)

A course of professional training in the Art of Movement for students who have passed a two-year course at the Art of Movement Studio, Addlestone, is offered at Trent Park College, Barnet, Hertfordshire.

Rural Science

For students who have advanced qualifications in Agriculture, Dairying or Horticulture:

City of Worcester Training College; Newton Park College, Bath.

Speech and Drama

For students who have passed a two-year course at Cardiff College of

Music and Drama:

City of Cardiff College of Education.

For students who have passed a two-year course at the Guildhall School of Music and Drama:

Trent Park College, Barnet, Hertfordshire.

(xiv) TEACHERS OF HANDICAPPED CHILDREN

Students who wish to teach handicapped children must first take a normal course of initial training and then obtain an additional qualification within three years of taking up an appointment in a special school for handicapped children. The course in the teaching of deaf children at the Department of Audiology and Education of the Deaf at the University of Manchester may be taken immediately after an initial training course, but candidates for other courses in the teaching of handicapped children, including the course in the teaching of the deaf at the University of London Institute of Education, are usually expected to have had some teaching experience.

INITIAL QUALIFICATIONS IN SCOTLAND

(i) RECOGNITION

In Scotland only teachers who hold a Teacher's Certificate issued by the Scottish Education Department may be appointed to permanent posts in maintained schools. Specific qualifications are required for the teaching of specific subjects in secondary schools and colleges of further education. Persons who do not hold a Teacher's Certificate may only be appointed to temporary posts and then only if a teacher holding the Certificate appropriate to the particular post is not available. Teachers wishing to take up permanent posts in further education establishments do not need to hold a Teacher's Certificate, but must have appropriate qualifications and experience. The Secretary of State for Scotland awards the following Certificates:

Teacher's Certificate (Primary Education). A certificate of competency to teach in primary schools or departments.

Teacher's Certificate (Secondary Education). A certificate of competency to teach a subject or subjects in secondary schools or departments.

Teacher's Certificate (Further Education). A certificate of competency to teach a subject or subjects in further education centres.

Endorsements. The Secretary of State may award certificated teachers special qualifications to act as a principal teacher of a

nursery school (women only); an infant mistress; a teacher of one or more categories of pupils requiring special educational treatment; a teacher of backward pupils in secondary schools or departments; or a teacher in other capacities approved by the Scottish Joint Council for Teachers' Salaries and the Secretary of State.

Endorsements are awarded after supplementary courses of training.

(ii) PROBATION

After taking a course of training recognised by the Scottish Education Department teachers are awarded a diploma or certificate of the college of education in which they were trained and a Probation Certificate issued by the Department. The Certificate confers the status of certificated teacher during a period of two years' approved probationary service in Scottish schools. On successfully completing their probation teachers receive from the Department the appropriate Certificate, which is their final recognition as certificated teachers.

(iii) TRAINING

The responsibility for the training of teachers in Scotland is entrusted to the nine colleges of education:

<u>College</u>	<u>Type of training</u>
Aberdeen College of Education, St. Andrew Street, Aberdeen	All classes of Certificate except physical education and further education.
Moray House College of Education, Holyrood House, Edinburgh, 8	All classes of Certificate except physical education and further education
Jordanhill College of Education, Jordanhill, Glasgow, W.3	All classes of Certificate except physical education for women; training for further education teachers.
Dundee College of Education, Park Place, Dundee	All classes of Certificate except physical education, homecraft and further education.
Craiglockhart College of Education, Edinburgh, 11	Roman Catholic women students only; all classes of Certificate except physical education, certain technical subjects and further education.
Notre Dame College of Education, Dowanhill, Glasgow, W.2	Roman Catholic women students only; all classes of Certificate except physical education, certain technical subjects and further education.
Dunfermline College of Physical Education, Woolmanhill, Aberdeen	Women students only.
Callendar Park College of Education, Falkirk, Stirlingshire	Women students only; three-year courses for the Teacher's Certificate (Primary Education).
Craigie College of Education, Ayr	Women students only; three-year courses for the Teacher's Certificate (Primary Education).

(iv) ENTRY REQUIREMENTS

Requirements for admission to courses for the Teacher's Certificate (Primary Education). The Teacher's Certificate (Primary Education) qualifies the holder to teach general subjects in primary schools or departments. Men wishing to qualify for it must first take a degree, or an honours associateship of a Scottish central institution, or an associateship or diploma of a central institution (together with a satisfactory level of preliminary general education), or hold or be eligible for a Teacher's Certificate (Secondary Education). They must then take a one-year course of professional training.

Women may take either a one-year course of professional training after graduating or a three-year course of initial training at a college of education. The minimum requirement for admission to a three-year course is two S.C.E. Higher grade passes (including English) and four Ordinary grade passes (including Arithmetic or Mathematics). Women over 23 may be accepted for training with slightly lower qualifications.

Requirements for admission to courses for the Teacher's Certificate (Secondary Education). The Teacher's Certificate (Secondary Education) qualifies the holder to teach a specific subject in secondary schools; it is also valid for work in primary schools.

The Certificate is awarded to students who have a degree or an associateship or a diploma of a Scottish central institution in a subject which is taught in schools and who have taken a course of professional training.

In some subjects (Physical Education and technical subjects, for example) the Certificate may be obtained by taking a course at a college of education. For students other than graduates the usual minimum requirement for admission to a three-year course is similar to that for entry to the three-year course for the Teacher's Certificate (Primary Education), except that a pass in Arithmetic or Mathematics is not obligatory. In some subjects a slightly lower level may occasionally be accepted.

The following training is required for the award of the Certificate in certain subjects:

Homecraft: *Either* a one-year course following or integrated with a course of homecraft studies in a central institution (i.e. Diploma in Domestic Science of Edinburgh College of Domestic Science, Glasgow and West of Scotland College of Domestic Science or Robert Gordon's Technical College, Aberdeen); *or* a one-term course or an

equivalent part-time course for teachers already holding a Secondary Certificate in another subject.

Music: *Either* a one-year course; *or* a three-year course where the candidate's principal qualification for the award of a Certificate is to be the Diploma in Music of Aberdeen and Dundee Colleges of Education; *or* a one-term course or an equivalent part-time course for teachers already holding a Secondary Certificate in another subject.

Physical Education: *Either* a three-year course leading to a Diploma in Physical Education (Dip.P.E.) of Jordanhill College of Education (men) or Dunfermline College of Physical Education (women); *or* a one-year course for teachers already holding a Primary or a Secondary Certificate in another subject.

Technical Subjects: *Either* a three-year course or, for candidates who have completed an apprenticeship, a two-year course or, for candidates who hold an appropriate degree or associateship or diploma of a Scottish central institution, a one-year course; *or* a one-term course or the part-time equivalent for teachers already holding a Secondary Certificate in another subject.

Other Subjects: *Either* a one-year course; *or* a one-term course or the part-time equivalent for teachers already holding a Secondary Certificate in another subject.

Note. The associateships, diplomas and other qualifications which are acceptable, in addition to degrees, as pre-training requirements are listed in Appendix A of 'Memorandum on Entry Requirements and Courses 1965', Scottish Education Department (published by H.M.S.O., price 2s. 3d.). They include the Associateship in Commerce (Teacher's) of the Scottish College of Commerce and the Diploma in Commerce (Teacher's) of Dundee Technical College, Heriot-Watt College and the Scottish College of Commerce.

Requirements for admission to courses for the Teacher's Certificate (Further Education). Training is open to candidates with acceptable technical or commercial qualifications who have been employed in industry or commerce. The minimum technical qualification is generally a Higher National Certificate or a Full Technological Certificate of the City and Guilds of London Institute.

Training is centralised at Jordanhill College of Education, Glasgow, and consists of a two-month full-time course at the College followed by a year's supervised teaching in further education and a

further two-month full-time course. The course is open only to teachers who have or have been offered an appointment in a further education establishment.

Note. The qualifications in addition to degrees which are acceptable as pre-training requirements are listed in Appendix B of 'Memorandum on Entry Requirements and Courses 1965', Scottish Education Department (published by H.M.S.O., price 2s. 3d.). They include the teachers' commercial qualifications noted above.

INITIAL QUALIFICATIONS IN NORTHERN IRELAND

(i) RECOGNITION

To be recognised as a teacher in Northern Ireland candidates must have qualifications prescribed by the Ministry of Education for Northern Ireland. Recognition does not carry the right to teach all subjects in all schools. Specific qualifications are required for the teaching of specific subjects in secondary schools and colleges of further education, but not in primary and special schools; teachers of specific subjects may be allowed to teach other subjects provided reports on their work are satisfactory.

Primary school teachers. To become eligible for recognition as a qualified teacher in primary schools candidates must normally complete a three-year full-time course of training approved by the Ministry of Education. Untrained graduates are not qualified for recognition as primary school teachers.

Secondary intermediate school teachers. To become eligible for appointment in a secondary intermediate school candidates must either have a degree, diploma or certificate approved by the Ministry of Education or have completed an approved four-year course of training for intermediate school teachers.

Grammar school and further education college teachers. To become eligible for appointments in grammar schools or colleges of further education candidates must have a degree, diploma or certificate approved for the purpose by the Ministry of Education.

Special school teachers. To become eligible for appointment in special schools teachers must normally have qualifications which would entitle them to recognition in primary or secondary schools. Teachers of blind or deaf or partially hearing pupils must have a special diploma or certificate regarded as appropriate by the Ministry of Education. Teachers requiring training for work in these schools usually take a course in England and Wales or Scotland.

(ii) APPROVED QUALIFICATIONS

The qualifications required as a condition of recognition are almost

identical with those recognised by the Department of Education and Science in England and Wales. Full details may be obtained from the Ministry of Education, Dundonald House, Upper Newtownards Road, Belfast. The qualifications fall into two broad groups, university degrees obtained in the United Kingdom and Ireland and specialist qualifications in Art, commercial subjects, crafts, Domestic Science, Music, Physical Education, Speech Training and Woodwork.

(iii) PROBATION

A teacher's first six terms of service constitute a probationary period during which his recognition is provisional. If reports on his work are satisfactory his recognition is confirmed; if they are unfavourable his probation may be extended or recognition withdrawn.

(iv) TRAINING

Teachers are trained in the following institutions:

Queen's University, Belfast, Department of Education; Stranmillis College, Belfast (Undenominational; men and women students); St. Joseph's Training College, Andersonstown, near Belfast (Roman Catholic; men students only); St. Mary's Training College, Belfast (Roman Catholic; women students only); Belfast College of Art; The College of Domestic Science, Belfast; The Ulster College of Physical Education, Jordanstown, Co. Antrim (women students only).

The normal length of courses provided in the three general training colleges (Stranmillis, St. Joseph's and St. Mary's) is three years for students preparing to teach in primary schools and four years for those preparing to teach in secondary schools. There are two courses for intending primary school teachers: Course A is for those who wish the emphasis of their training to be on the teaching of children aged 7 to 11; Course C is for those who wish to work with children aged 5 to 8. Some students who take Course C are trained also for work in nursery schools. The secondary school course of training, Course B, leads to a qualification to teach general subjects and a subject of the student's choice in secondary intermediate schools; this course lasts four years.

Summary of training courses

Course A: 3 years; for primary school teachers, with an emphasis on the teaching of pupils aged from 7 to 11.

Course C: 3 years; for primary school teachers, with an emphasis on the teaching of pupils under 8.

Course B: 4 years; for secondary intermediate school teachers; general subjects with an emphasis on a selected subject such as art or light crafts, commercial subjects, crafts (men), domestic science (women), mathematics, music, physical education, science, speech and drama.

Combined Course: 4 years; students enrol at Queen's University as well as at a training college and follow a three-year degree course and then a year's professional training in the college. Selection for this course is made on the results obtained in English language and the other four subjects on which admission to Queen's University is based.

Professional training for graduates: 1 year; courses of professional training for graduates are provided in the general training colleges and in Queen's University Department of Education. The University course leads to the award of the Diploma in Education.

Special one-year course for music teachers: for candidates holding approved qualifications in Music.

Ulster College of Physical Education provides a three-year non-residential course of training for women specialists in physical

HIGHER PROFESSIONAL EDUCATION

*The Examinations for the qualifications of
Associate, Licentiate and Fellow of the College of Preceptors*

- A.C.P. Qualified *trained* teachers may apply for exemption from some subjects on the basis of a satisfactory course at a recognised training college.
- L.C.P. This qualification is recognised for an extra payment on the Burnham Salary Scales.
- F.C.P. A thesis only examination, open to
 - (a) Graduates with a teachers' diploma;
 - (b) Licentiates of the College of Preceptors;
 - (c) Trained teachers of long experience with certain additional qualifications.

A.C.P. and L.C.P. Regulations (in one booklet) price 1/6.
F.C.P. Regulations free.

From the Secretary,

The College of Preceptors, 2 & 3 Bloomsbury Square, London, W.C.1

education. The Belfast College of Domestic Science provides a three-year course for specialists in Domestic Science. The Belfast College of Art provides a one-year non-residential course for students who have taken its three-year Diploma course.

(v) REQUIREMENTS FOR ADMISSION TO TRAINING

Candidates wishing to enter training colleges must be at least 18 on 1st October in the year in which they seek entry; applicants for admission to the one-year course for music teachers must be not less than 20 on 1st October in the year in which they seek entry.

Eighteen-year-old candidates must have obtained five G.C.E. passes in addition to English (or the equivalent). The five subjects should include one out of: English Literature; a foreign language; an historical subject; Geography; and one out of: a mathematical subject; a scientific subject; Domestic Science; Geography; and one other subject from these two groups, provided that Geography may be taken into account for the purpose of either group but not of both.

MEMBERSHIP OF PROFESSIONAL BODIES

There are in the United Kingdom numerous associations of teachers, whose main function is to represent the interests of their members. A few associations have grades of membership and confer the use of designatory letters.

The College of Preceptors

2 and 3, Bloomsbury Square, London, W.C.1

(i) INDIVIDUAL MEMBERSHIP

Individual membership is open to anyone engaged in education who has obtained one of the College's qualifications or is a graduate of a British or another approved university or is a qualified teacher in England and Wales, Scotland and Northern Ireland or has other qualifications acceptable to the College.

Fellow (F.C.P.). The Fellowship of the College is awarded on the basis of a thesis of 20,000 to 30,000 words, embodying the results of some original or experimental work in education. Candidates may also be asked to attend an oral examination. Candidates must have had at least five years' experience in educational work or teaching, be graduates or Licentiates of the College and hold a Diploma or Certificate in Education or have other qualifications acceptable to the College.

Licentiate (L.C.P.). The Licentiateship of the College is

awarded on the basis of a thesis of 10,000 words. Candidates must be teachers or engaged in educational work. In addition to the thesis requirement, candidates take a practical teaching test and a written examination on education through their own subject or their own special field of interest; they also take three written papers on an academic subject and four written papers on the philosophical, sociological and psychological bases of Education (two papers), educational systems and their development, the History of Education or advanced educational Psychology.

Associate (A.C.P.). The Associateship examination consists of four written papers, which may be taken at one examination or as individual papers in separate examinations, in the principles of Education, methods of teaching, Health Education, and educational systems and their development since 1900. Candidates must also take a practical teaching test.

Possession of the Diploma of Licentiate by examination entitles teachers to an addition to salary on the scale agreed for teachers in maintained schools.

(ii) CORPORATE MEMBERSHIP

Corporate Membership is open to any recognised school, college or university.

The Educational Institute of Scotland

46, Moray Place, Edinburgh, 3

Fellow and Honorary Fellow (F.E.I.S. and Hon.F.E.I.S.).

Honorary Fellowship may be conferred on persons at home or abroad who have rendered outstanding service to Education.

Fellowship may be conferred on Ordinary Members who have attained eminence as teachers, on Ordinary Members of at least five years' standing who present a thesis representing an original contribution to learning in relation to Education and on other persons who have rendered outstanding service to Education or are eminent in subjects related to Education or who have 20 years' highly successful experience in Education.

Ordinary Member. Certificated teachers, full-time officials of the Institute, other teachers with acceptable qualifications and members of the National Union of Teachers who take up permanent teaching posts in Scotland are eligible for Ordinary Membership.

Life Member. Retired teachers who have been Ordinary Members of the Institute for at least 30 years are eligible for Life

Membership. Retired teachers who have had less than 30 years' membership may be recommended for Life Membership.

Student Member. Students who have been accepted for training in a recognised college of education are eligible for Student Membership without the payment of subscription. Such Membership holds good until the student takes up a teaching appointment.

Faculty of Teachers in Commerce Ltd.

13, Stamford Place, Sale, Cheshire

The Faculty was established as a national organisation for teachers in commercial subjects in 1916. It awards Teacher's Diplomas and Student's Certificates in a number of subjects.

Fellow (F.F.T.Com.). Fellowship may be granted to teachers and others who are exceptionally good candidates. Fellowship may also be granted to candidates who have obtained three of the Faculty's Teacher's Diplomas in different commercial subjects and have five years' approved teaching experience.

Associate (A.F.T.Com.). Associateship is the normal grade for commercial teachers with good commercial qualifications and experience in several subjects. Associateship may also be granted to candidates who have obtained two of the Faculty's Teacher's Diplomas in different commercial subjects and have three years' approved teaching experience.

Member (M.F.T.Com.). Membership is usually granted to candidates with more limited attainment and experience, especially where the qualifications and experience are restricted to one commercial subject. Membership may also be granted to candidates who have obtained one of the Faculty's Teacher's Diplomas or a comparable Diploma in any subject for which there is a Faculty examination.

EXAMINATIONS

Diploma examinations for teachers are conducted in each of the following subjects:

Book-keeping; Commerce; Economic Geography; Economics; English; Office Practice and Secretarial Duties; Shorthand; Typewriting.

Candidates for these examinations must be at least 18. Possession of a Teacher's Diploma awarded by the Faculty does not qualify the holder to the grant of qualified teacher status by the Department of Education and Science, but may be regarded as a useful indication of teaching skill.

Examinations for Student's Certificates are conducted in the following subjects:

Audio-typing (elementary, intermediate and advanced); Book-keeping (junior and senior); Commerce (junior and senior); Commercial Arithmetic (junior and senior); Economics (junior and senior); Economic Geography (junior and senior); English (junior and senior); French (intermediate); Handwriting; Secretarial Certificate in Foreign Correspondence (elementary, intermediate and advanced); Shorthand Theory (elementary, intermediate and advanced); Shorthand Speed; Shorthand-Typist's Certificate (elementary, intermediate and advanced); Typewriting (elementary, intermediate and advanced); Typewriting Speed.

The Society of Commercial Teachers

59, Arundel Drive West, Saltdean, Brighton, Sussex

Fellows (F.S.C.T.) are teachers over 21 who are Associates of the Society or who are qualified to be Associates and have been teaching a commercial subject for at least three years together.

Associates (A.S.C.T.) are qualified teachers, trained to teach commercial subjects and having taught one or more commercial subjects, graduates who have taught one or more commercial subjects, holders of a Teacher's Certificate awarded by the Royal Society of Arts, holders of certificates awarded outside the United Kingdom by the Joint Examining Board for Teachers' Diplomas in Pitman's Shorthand or holders of diplomas awarded by certain professional bodies (e.g. the Chartered Institute of Secretaries), provided they have taught one or more commercial subjects.

Temporary Probationers are those who have passed the written papers of the Royal Society of Arts' Teacher's Certificate examination, but whose certificate has not been ratified when they apply for membership of the Society.

UNIVERSITY DEGREES

(See also Post-credential Diplomas, page 1029.)

(i) FIRST DEGREES

There are a few first degree courses in Education or in a combination of subjects including Education. The Robbins Report recommended that suitable students in teacher training colleges should have an opportunity to read for a degree concurrently with their

professional training, or after it, and several universities are expected to announce plans for selected students in their institute's colleges of education to take a Bachelor of Education general degree course. These B.Ed. courses will constitute a full professional qualification as they will contain professional training.

Degree courses are available or are under consideration at the following universities:

Aberdeen. B.Ed. (Under consideration.)

Birmingham. B.A. (Combined Honours) in Physical Education and one of the following subjects: Archaeology; Drama; English; French; Geography; German; Greek (Classical or Modern); History; Italian; Latin; Mathematics; Music; Philosophy; Psychology; Russian; Social Study; Spanish; Theology. 3-year course. 3 G.C.E. 'A' level passes required.

Glasgow. The degree of B.Ed. will now be conferred on students following a 4-year course at Jordanhill College of Education. The present postgraduate course for the degree of Ed.B. will lead to the degree of M.Ed.

Hull. The University has approved the award of a B.Ed. degree. The examinations will be open to approved students after a four-year course at Endsleigh and Kingston-upon-Hull colleges of education.

Keele. B.A. Honours with Diploma (Certificate in and after 1966) **in Education:** a course in Education, including practical teaching experience, may be taken concurrently with the degree course. 4 years. 2 G.C.E. 'A' level passes. The University is starting a B.Ed. degree for selected students in the member colleges of its Institute. Students who gain the Institute's Certificate in Education will be able to take the degree examinations after a fourth year of study.

Leeds. B.Ed.: selected students at any college in the Leeds Institute of Education may go to a fourth year of study for a B.Ed. degree.

Liverpool. B.Ed. The University has approved a new degree course for selected students in its Institute's colleges. The course will be 4 years full-time and will lead to a general degree of a higher standard than the Certificate of Education at present taken by all students.

London. The University announced the introduction of a B.Ed. course for selected students in January 1966.

Newcastle. B.Ed.(Speech): 3 years. 2 G.C.E. 'A' level passes, including Biology or Zoology, and Chemistry or General Science at 'O' level.

Nottingham. B.Ed.: selected students who satisfy the Univer-

sity's matriculation requirements may take a four-year course in Education and two academic subjects, leading to the award of the Nottingham Teacher's Certificate and the degree of B.Ed.

Sheffield. B.Ed.: a one-year degree course in either the Faculty of Arts or the Faculty of Science is available to selected students who have successfully completed an initial course of training in one of the colleges of education in the Sheffield area training organisation.

Sussex. B.A. Honours in the School of Educational Studies: 3 years. 2 G.C.E. 'A' level passes. Students may major in one of the following subjects: English; Geography; History; Philosophy; Psychology; Religious Studies; Science; Sociology.

Wales (Aberystwyth, Bangor and Cardiff). B.A. Special in Education: 3 years. 2 G.C.E. 'A' level passes.

Wales (Aberystwyth). B.Sc. Special in Education: 3 years. 2 G.C.E. 'A' level passes.

Welsh C.A.T. B.A. Honours in General Studies: 3 years. 2 G.C.E. 'A' levels. Students may take Education with one of the following subjects: English; History; Philosophy; Economics; Economic History.

York. B.A. Honours: 3 years. 2 G.C.E. 'A' level passes. Students may take Education with one of the following subjects: Biology; Chemistry; English; History; Language; Mathematics; Music; Physics.

(ii) HIGHER DEGREES

Higher degrees in Education are awarded at the following universities. In general candidates must be graduates and in many cases have certificates or diplomas in Education. In addition, some universities require teaching experience.

Aberdeen. Ed.B.: Diploma (**Dip.Ed.**) in first year, followed by Honours in second year.

Belfast. B.Ed.: 2 years full-time or 3 years part-time.

Birmingham. M.Ed.: 1 year full-time or 3 years part-time.
Ph.D.(Ed.): at least 2 years full-time.

Bristol. M.A. or M.Ed.: 1 year full-time or 2 years part-time.

Durham. M.Ed.: 3 years part-time.

Edinburgh. B.Ed.: 3 years. Diploma followed by Honours.

Exeter. M.A.: 1 year full-time or 2 years part-time. **Ph.D.:** 2 years full-time or 3 years combined full- and part-time.

Glasgow. Ed.B.: 3 years. Diploma followed by Honours. (This course will now lead to the award of the degree of M.Ed.).

Keele. M.A.: 1 year full-time or 2 years part-time. **Ph.D.:** 2 years full-time or 4 years part-time.

Hull. M.Ed.: 2 years.

Leeds. M.Ed.: 2 years full-time or 3 years part-time. **Ph.D.:** 2 years full-time or 3 years part-time.

Liverpool. M.A.: 2 or 3 years part-time. **M.Ed.:** 2 years part-time. **Ph.D.:** 2 years full-time or 3 years part-time.

London. M.A. or Ph.D.: the higher degree structure is under consideration.

Newcastle. M.Ed.: 3 years part-time.

Nottingham. M.Ed.: 1 or 2 years full-time or 2 years part-time. **Ph.D.:** 2 years full-time or 4 years part-time.

Reading. M.A.: 2 years full-time or 3 years part-time. **M.Ed.:** 2 years part- and full-time or 3 years part-time. **Ph.D.:** 3 years full-time.

Sheffield. M.A. or M.Sc.: 2 years part-time. **Ph.D.:** 4 years part-time.

Southampton. M.A.(Ed.): 1 year full-time or 3 years part-time. **Ph.D.:** 2 years full-time or 3 years part-time.

St. Andrews. Ed.B.: 2 years. Diploma followed by Honours.

Wales. M.A. or M.Sc.: 1 year full-time and 1 year part-time. **M.A.(Ed.):** as for other Master's degrees, or 3-year part-time course at Swansea.

POST-CREDENTIAL DIPLOMAS

There are numerous supplementary and refresher courses for serving teachers, some of which lead to the award of Institute of Education supplementary certificates. Diplomas are usually awarded only after special courses of advanced study. The following certificates and diplomas are awarded:

ADULT EDUCATION

University of Manchester (Department of Adult Education).

Diploma in Adult Education: awarded after a one-year full-time or three-year part-time advanced course of study of the organisation, principles and methods of all types of educational work with adults. The course is open to graduates, trained teachers with two years' approved experience in adult education and to others with satisfactory qualifications.

University of Nottingham (Department of Adult Education).

Diploma in Adult Education: awarded after a one-year full-time or three-year part-time course of basic training in Adult Education, with opportunities to specialise in the administration of Adult Education, or adult learning and teaching or educational television and sound broadcasting. The course is open to graduates and non-graduates with appropriate experience.

ART EDUCATION

University of Birmingham (Institute of Education). **Diploma in Art Education:** the course is open to teachers with at least five years' experience who have graduate or equivalent qualifications in Art; the purpose of the course is to provide an opportunity for research into the structure of Art and for planned study of current thinking and practice in Art Education. The course is one year full-time.

University of London (Institute of Education). **Diploma in Art Education:** the course is open to teachers with at least five years' experience in the teaching of Art and Crafts who have graduate or equivalent qualifications in art. The course is designed to encourage students to explore a particular field of Art Education of their own choosing. Candidates are required to submit a dissertation.

AUDIO-VISUAL AIDS

University of London (Institute of Education). **Diploma in the Theory and Practice of Audio-Visual Aids:** awarded to experienced teachers after a one-year full-time course.

BILINGUAL EDUCATION

University of Wales (Aberystwyth). **Diploma in Bilingual Education:** awarded after a one-year course to experienced teachers who wish to study problems involved in the teaching of bilingual children and in the organisation of education in bilingual communities, with special reference to bilingual areas in Wales and the teaching of Welsh as a second language.

CURRICULAR STUDIES

University of Leeds (Institute of Education). **Diploma in Curricular Studies:** one-year course normally intended for graduate teachers with at least five years' teaching experience; its purpose is to provide an opportunity to consider the place of their special subject in the secondary school curriculum and to study teaching methods in it and course planning for children of different ages and levels of ability.

DANCE

The Art of Movement Studio (Woburn Hill, Addlestone, Surrey). **Diploma:** students who have taken a one-year course in Movement Study and Modern Educational Dance at the Art of Movement Studio to qualify for posts of higher responsibility may go on to one

or two years of further study in preparation for the Diploma of the Art of Movement Studio.

DRAMA

University of Newcastle (Institute of Education). **Diploma in Drama in Education:** after a one-year special course in the Institute on the value of drama during children's development, teachers may go on to one or two years of part-time study in preparation for the examination for the Diploma in Drama in Education.

EDUCATION

University of Aberdeen. **Diploma in Education:** awarded at the end of the First Stage of the course for the degree of Ed.B. (*see* page 1028) after examinations in Education, Psychology and Biology. Candidates must have a certificate of proficiency as a teacher or have had at least three years' approved teaching experience.

Queen's University, Belfast. **Diploma in Education:** awarded after a one-year full-time or a three-year part-time course in the principles of Education, practice of Education and Educational Psychology. The Northern Ireland Ministry of Education awards its teacher's certificate to successful students in the full-time Diploma course who are graduates in arts, Science or Economics, provided that they satisfy the Ministry's Inspectors in practical teaching.

University of Birmingham (Department of Education). **Diploma in Education:** awarded after examination and the submission of a thesis to graduate and non-graduate teachers with at least five years' experience. The object of the course is to prepare teachers for work in responsible positions in schools or for changing over to teaching in a different type of school or in colleges of education.

University of Bristol (Institute of Education). **Diploma in Education:** taken in two stages. Part I may be taken as a full-time course or as a part-time course; it leads to the award of the University's **Advanced Certificate in Education**. After passing Part I, students may go on to Part II in which they write a thesis for presentation normally one or two years after Part I. The whole course is intended to give teachers (graduate and non-graduate) an opportunity to study Education in several aspects.

University of Edinburgh. **Diploma in Education:** awarded after a one-year course, which is the First Stage towards the B.Ed. degree (*see* page 1028). Candidates must have taken an approved course of initial training or have had three years' satisfactory teach-

ing experience. The course leads to examinations in Education and Psychology.

University of Exeter (Institute of Education). **Diploma in Education:** awarded after examinations and the submission of a thesis to experienced teachers wishing to carry their study of Education to a more advanced level. All students follow courses in the History, Psychology and Sociology of Education and undertake more specialised work in either primary or secondary Education.

University of Glasgow. **Diploma in Education:** awarded after examinations to graduates who have taken a one-year course in the principles of Psychology and Education, educational methods, Physiology/Biochemistry and Hygiene. The Diploma is the First Stage of the course for the degree of Ed.B. (*see* page 1028). Candidates must have taken a course of initial training or have had at least three years' satisfactory teaching service.

University of Hull (Institute of Education). **Diploma in Education:** awarded after examinations to experienced teachers who have taken a one-year course of study of Education at an advanced level. All students study current Educational Thought and Practice and take two other courses from among several options, including Educational Psychology, Educational Organisation and Administration, and the Theory and Practice of Education.

University of Keele (Institute of Education). **Diploma of Advanced Study in Education:** awarded after examinations and the submission of a dissertation to candidates who have taken a one-year full-time course in the Theory of Education and the design of educational investigation and an optional course chosen from among the History of Education, Administration of Education, Comparative Education, Educational Statistics, Educational Psychology, methods of teaching and Education and Technology.

University of Liverpool (School of Education). **Diploma in Education:** awarded after examinations and the submission of an extended essay to teachers with at least five years' experience who wish to specialise in primary or secondary Education and who have taken a one-year full-time or the equivalent part- and full-time course. The course includes a special study of either primary or secondary Education and the study of Educational Psychology and child development, the general theory of Education and the Structure and Organisation of Education in England and certain other countries.

University of Nottingham (Institute of Education). **Diploma in Education:** awarded after examinations to experienced, qualified serving teachers who have taken a one-year full-time course of advanced study of the development of school children, with special

reference to modern educational practice in primary and secondary schools. All students take a general course and may specialise in Education in the primary school or Education in the secondary school or the Education of backward and slow learning children.

University of St. Andrews. Diploma in Education: awarded to graduates who have taken a course of initial training or have had three years' satisfactory teaching service after a one-year course, which is the First Stage in the course for the degree of Ed.B. (*see* page 1029). The course covers the History and Theory of Education, the principles of Psychology, Educational Administration and curricular method.

University of Oxford (Institute of Education). Advanced Certificate in Education: awarded after examinations and the submission of a thesis or other approved professional exercise to teachers who have taken a one-year full-time course followed by a one-year part-time course of study. The course is intended for teachers holding or seeking posts of responsibility in the educational service.

University of Reading (Institute of Education). Diploma in the Advanced Study of Education: awarded to experienced serving teachers who have taken a one-year full-time course. The course is general, with some provision for specialisation in the student's own field of experience, and covers the aims of Education in a changing world, contemporary educational issues in England and Wales, and organisation, methods and curriculum in schools and further education establishments.

EDUCATIONAL STUDIES

University of Nottingham (Institute of Education). Diploma in Educational Studies: awarded to graduates or the equivalent after a two-year part-time course in the Philosophy, History and Psychology of Education. The course is intended for teachers, administrators or lecturers and includes an introduction to statistical methods of research in Education and a number of special fields of study. It is also intended as a basic course for candidates wishing to read for the Nottingham M.Ed.; admission to the degree course on a part-time basis is usually limited to those who have taken the Diploma.

University of Wales (Aberystwyth, Education Department). Diploma in Educational Studies: awarded after examinations and the submission of a dissertation to experienced teachers who wish to extend their study of Education and to lecturers and intending lecturers in colleges of education. Students specialise in the

Philosophy of Education or the Sociology of Education or Educational Psychology and take a subsidiary course in Experimental Education or Comparative Education or in the methodology of teaching a particular school subject.

EDUCATIONAL PSYCHOLOGY

University of Birmingham (Education Department). **Post-graduate Diploma in Educational Psychology:** a qualification for those intending to become educational psychologists in a school psychological service or in a child guidance clinic. The course, which is one year full-time, is open to experienced teachers with honours degrees in Psychology or equivalent qualifications (such as certain higher degrees in Education). The course includes practical work in the University's Department of Child Study. **Diploma in the Psychology of Childhood:** awarded after a one-year full-time course for graduate and non-graduate teachers and the course is intended mainly to offer some preparation for promotion to responsible posts in the training of teachers, in advisory work with local education authorities or in the organisation of special services such as Remedial Education.

Cambridge Institute of Education. Diploma in Experimental Educational Psychology: one-year course, intended to give a sound knowledge of the principles and techniques of psychological research and of modern measurement methods in Education. It is particularly suitable for candidates taking up posts in colleges of education, who may have to act in an advisory capacity to a local education authority or who may wish to undertake educational research on an aspect of Education with which they are otherwise familiar.

University of Glasgow. Diploma in Educational Psychology: candidates must be Bachelors of Education of a Scottish university or hold an equivalent degree or have 1st or 2nd Class degrees in Psychology and either have taken a course of initial training or have had three years' satisfactory teaching service. The course lasts two years and includes academic and practical training.

University of Keele (Institute of Education). **Diploma of Advanced Study in Education, with special reference to guidance and counselling:** the Diploma (which is an alternative form of the Diploma of Advanced Study in Education described above, *see* page 1032) is awarded after examinations and the submission of a dissertation to experienced secondary teachers. Students take courses in the Theory of Education and the design of

Educational Investigation and optional courses in the study of guidance and counselling.

University of Leicester (School of Education). **Diploma in the Sociology and Psychology of Education:** awarded on the basis of assessment of course and a dissertation to qualified teachers who have undertaken some previous study in the Social Sciences. The one-year course is designed to provide facilities for the study of the educational aspects of Sociology and Psychology and is especially relevant to candidates who wish to work in colleges of education.

University of London (Maudsley Hospital, London, S.E.5). **Postgraduate Diploma in Psychology (Abnormal Psychology):** one-year course, intended for candidates who mean to specialise in Clinical Psychology but is also useful to qualified teachers who have had some training in Psychology (to honours degree standard or the equivalent).

University of London (University College, Department of Psychology). **Academic Postgraduate Diploma in Psychology: (Section B) Educational Psychology:** one-year course leading to a qualification for candidates intending to become psychologists in the school psychological service or in child guidance clinics. It is open to experienced teachers who have an honours degree in Psychology or the equivalent and consists of theoretical and practical work in general Educational Psychology and the Psychology of the individual child. **Diploma in Child Development:** the object of the one-year course is to give experienced teachers further knowledge of the Psychology and educational needs of children up to the age of 11.

University of Manchester (Department of Education). **Diploma in Educational Psychology (Child Guidance):** one-year course, intended for teachers who wish to become educational psychologists in child guidance clinics and the school psychological service and is open to candidates with an honours degree in Psychology or an equivalent qualification. The course includes theoretical and practical work. **Diploma in Educational Guidance:** one-year course, which is for approved teachers or psychologists, provides an opportunity for the study of Psychology applied to Education, particularly such work as testing and educational guidance. It is intended for teachers wishing to become responsible for the organisation of general educational guidance in large secondary schools.

University of Reading (Institute of Education). **Diploma in Educational Guidance:** one-year course covering the development of children and young people and their Psychology, the

general principles of guidance and the effect of modern developments on the school curriculum and activities.

University of Wales (Swansea). Postgraduate Diploma in Educational Psychology: one-year course, intended for experienced teachers who wish to work as educational psychologists in the school psychological service and in child guidance clinics; candidates must have an honours degree in Psychology or the equivalent and at least two years' teaching experience.

Postgraduate courses in Educational Psychology: courses for experienced teachers with honours degrees in Psychology or the equivalent are also provided by the two following establishments:

Child Guidance Training Centre (Gloucester House, 33, Daleham Gardens, London, N.W.3).

The Tavistock Clinic and Institute of Human Relations (2, Beaumont Street, London, W.1).

ENGLISH

University of London (Institute of Education). Certificate in the Teaching of English: awarded to experienced teachers after a two-year part-time (evening) course. **Diploma in the Teaching of English as a Foreign Language:** awarded on examination at the end of a one-year course for experienced teachers. The course provides opportunities for studying the theoretical foundations of successful language teaching and for trying out techniques derived from them. Students undertake two months' teaching practice away from London.

University of Manchester (School of Education). Diploma in the Teaching of English Overseas: awarded to experienced teachers after a part-time course.

Welsh C.A.T. Diploma in the Teaching of English as a Foreign Language: awarded after a one-year full-time course to experienced teachers from the United Kingdom and overseas. Candidates should be graduates or have equivalent qualifications in English, modern languages, Education or other appropriate subjects. The Diploma is awarded after examinations and the submission of a thesis.

FURTHER EDUCATION

University of Newcastle (Institute of Education). Diploma in Further Education: awarded to experienced teachers on examination after a three-year part-time course designed to provide a study of ways in which Further Education can meet the needs of a changing industrial society.

HANDICAPPED CHILDREN (BLIND CHILDREN)

University of Birmingham (Department of Education). **Supplementary Certificate:** the University offers a one-year course in the Teaching of the Blind for candidates who have had at least two years' teaching experience with normal children. The course provides practice in the Teaching of Blind Children and a general background of Educational Psychology, Child Development and Social Psychology, with emphasis on the special educational needs of blind children. Students are assessed on their practical work, a written examination and a dissertation. **Diploma in Special Education (Blind):** awarded to experienced teachers who are already qualified in the Teaching of Blind Children and wish to make a more advanced study of the subject. The course also includes some study of other groups of handicapped children and their education.

(DEAF CHILDREN)

University of London (Institute of Education). **Diploma in the Teaching of Deaf and Partially Hearing Children:** awarded to experienced teachers who wish to work with deaf and partially hearing children. The course, which lasts one year, includes the study of normal child development and its bearing on the educational and psychological problems of handicapped children.

University of Manchester (Department of Audiology and Education of the Deaf). **Certificate for Teachers of the Deaf:** awarded after a one-year course to graduates and qualified teachers who wish to teach the deaf. The course includes Child Development, Audiology, Speech, Curriculum and Methods of Teaching, teaching practice in schools for the deaf and partially hearing and in units for the partially hearing attached to ordinary schools. **Diploma in Audiology:** awarded (in collaboration with the University Department of Otolaryngology) to qualified and experienced teachers of the deaf, psychologists, doctors and qualified speech therapists who wish to become eligible for appointment as audiologists in public health departments and audiology clinics and as members of local education authority and special school staff. The course, which lasts one year, includes experimental work and clinical experience.

CHILDREN WITH OTHER HANDICAPS (e.g. backward, educationally subnormal (E.S.N.), maladjusted and physically handicapped children)

University of Birmingham (Department of Education). **Diploma in Special Education (E.S.N.)**: awarded after a one-year course to teachers who have some experience of teaching handicapped or backward children. The course is intended as a preparation for responsible posts in E.S.N. schools and classes, in remedial and advisory work or in teacher training.

Cambridge Institute of Education. Diploma in the Teaching of Educationally Subnormal Children: awarded after a one-year course to teachers and lecturers with at least five years' teaching experience. The course is intended to equip candidates with the theoretical and practical understanding of the educational problems which arise in the teaching of educationally subnormal and maladjusted children.

University of Durham (Institute of Education). **Diploma in Remedial Education**: awarded after a one-year full-time course and a year's part-time study leading to a written report by candidates. The course is intended for teachers who wish to work in special education or in remedial services. The course includes practical investigations and theoretical analysis.

Kingston-upon-Hull College of Education. Certificate or Diploma in the Education of Handicapped Children: the Certificate or Diploma, according to the level reached by the student, is awarded after a one-year course to teachers with not less than five years' experience who work with or wish to work with handicapped children, especially those who are educationally subnormal, physically handicapped, delicate or emotionally maladjusted.

University of Leeds (Institute of Education). **Diploma in the Education of Backward Children**: awarded after a one-year course to teachers with at least five years' approved experience. The course provides an opportunity for the advanced study of child development, with special reference to slow learners, of possible causes of slow learning and of the principles and practice of education.

University of Leicester (School of Education). **Certificate in the Education of the Handicapped Child**: awarded after a one-year course at the City of Leicester College of Education to experienced head and assistant teachers. The course covers the requirements of teachers concerned with backwardness, physical handicap or maladjustment and consists of a basic course with opportunity to specialise in one of these three forms of handicap.

University of Liverpool (School of Education). **Diploma in the Teaching of Handicapped Children**: awarded after a one-year course to teachers with at least five years' experience.

The course has a common core, with opportunity to study the teaching of educationally subnormal or physically handicapped or maladjusted children.

University of London (Institute of Education). **Diploma in the Education of Maladjusted Children:** awarded to experienced teachers after a one-year course on child development, the psychological and social causes of maladjustment, the educational treatment of the maladjusted child, school administration and organisation and practical work. **Diploma in the Teaching of Educationally Subnormal Children:** awarded to experienced teachers who wish to work with educationally subnormal children. The one-year course includes Psychology, School Administration, the Education of subnormal children, social and administrative aspects and teaching practice. **Diploma in the Education of Physically Handicapped Children:** awarded after a one-year course, it is intended to provide experienced teachers with an opportunity to study the problems of teaching physically handicapped children, especially those with cerebral palsy.

University of Manchester (Department of Education). **Diploma in the Education of Handicapped Children:** awarded after a one-year course to experienced teachers who have taught both normal and handicapped children. The course includes the study of the development and education of subnormal, maladjusted and physically handicapped children, experimental teaching and child study. Students undertake a piece of experimental work. **Diploma in the Education of Maladjusted Children:** the Diploma course, which will probably be similar to that at London (*see above*), is subject to approval by the University.

Maria Grey College (Twickenham, Middlesex). **Certificate in the Education of Handicapped Children:** awarded after a one-year course of further training for experienced teachers who wish to specialise in the education of slow-learning or retarded children.

University of Newcastle (Institute of Education). **Diploma in the Education of Handicapped Children:** awarded after a one-year full-time course and one or two years' part-time study to experienced teachers who work with or wish to work with physically handicapped or educationally subnormal or maladjusted children or who are responsible for remedial classes in ordinary schools.

Newcastle upon Tyne College of Education. **Certificate in the Education of Backward Children:** awarded after a one-year course to teachers with some experience who wish to study the Education of backward children in ordinary and special schools.

The course includes the study of the Principles of Education, Child Development, the Psychology and Sociology of Backwardness, and the Administration and Organisation of classes and schools for backward children.

University of Oxford (Institute of Education). **Certificate in the Education of Educationally Subnormal and Mal-adjusted Pupils:** awarded after a one-year course at Culham College, Abingdon, Berkshire, for experienced teachers. The course is intended to deal with the theoretical background necessary to an understanding approach to handicapped children and with the practical methods of helping them.

University of Southampton (Institute of Education). **Diploma in the Education of Handicapped Children:** awarded after a one-year course to teachers with at least five years' experience who wish to acquire a more advanced qualification in the education of educationally subnormal or maladjusted pupils. The course consists of a detailed study of the more specialised aspects of sub-normality and maladjustment.

University of Wales (Bangor, Department of Education). **Diploma in Remedial Education:** awarded after a one-year course to teachers with at least five years' experience. The course covers the causes of learning failure, remedial teaching techniques, the organisation of special schools and classes and has special reference to the remedial education of bilingual children; it includes practical work placing particular emphasis on increasing the backward child's confidence and interests through art, crafts and other creative activities.

University of Wales (Swansea, Department of Education). **Diploma in Special Education:** awarded after a one-year course to experienced teachers who wish to study the problems involved in the teaching of either backward or maladjusted children.

Other courses in the education of handicapped children are available at the following establishments:

University of Reading Institute of Education (teaching of backward children in ordinary schools; one term); Cheshire College of Education, Alsager (education of the dull child in the ordinary school; one term); Manchester Training College (teaching of the slow-learning child in the ordinary school; one term). One-year courses: Avery Hill College of Education (education of handicapped children); City of Birmingham College of Education (education of handicapped children); Caerleon College of Education (special education in special or ordinary schools); City of Coventry College of Education (education

of handicapped children); Eastbourne College of Education (education of E.S.N. or backward children); Edge Hill College of Education (backwardness and maladjustment); Glamorgan College of Education (education of handicapped children other than the blind and the deaf); City of Leeds College of Education (education of backward children); Manchester Training College (education of children with learning disabilities); Matlock Training College (education of backward children); Redland College, Bristol (education of handicapped children); St. Mary's College, Twickenham (education of handicapped children, other than the blind and deaf); City of Sheffield College of Education (education of children with learning difficulties).

HEALTH EDUCATION

University of London (Institute of Education). **Diploma in the Content and Methods of Health Education:** awarded after a one-year course to teachers and lecturers in colleges and departments of education, among others. The course covers the general principles of Education and of Ordinary and Preventive Medicine underlying Health Education, the History and Administration of Public Health and Education, the scientific bases of health and behaviour and the principles, methods and media of health education.

HOME ECONOMICS

University of Bristol (Institute of Education). **Advanced Certificate in Education with special reference to Home Economics:** awarded after a one-year course at Bath College of Education (Home Economics) to suitably experienced teachers who wish to study Home Economics in its contemporary, educational and social context. The course includes practical and experimental work.

University of London (Institute of Education). **Diploma in Education with special reference to Home Economics:** awarded after a one-year course at Battersea College of Education to experienced teachers who wish to increase their knowledge of the social and scientific aspects of their subjects and to study teaching methods appropriate to the complex nature of Home Economics and to the changing status of the older pupils.

University of Liverpool (School of Education, in association with F. L. Calder College of Domestic Science). **Diploma in the**

Teaching of Home Management and Family Affairs: awarded after a one-year course to qualified teachers of Domestic Science interested in doing more advanced work with pupils in the 15 to 18 age group or in lecturing in colleges of education. The course includes investigation and experimental work.

MATHEMATICS

University of Leicester (School of Education). **Diploma for Teachers of Mathematics:** awarded to experienced teachers after a three-year part-time course designed to provide further study of the subject as well as to deal with its cultural background and methods of teaching it.

University of London (Institute of Education). **Certificate in the Teaching of Mathematics:** awarded to experienced teachers after a two-year part-time (evening) course.

University of Newcastle (Institute of Education). **Certificate in the Teaching of Mathematics:** awarded to experienced secondary school teachers after a two-year part-time course.

MUSIC

University of London (Institute of Education). **Certificate in the Teaching of Music in the Junior School:** awarded to experienced teachers after a two-year part-time (evening) course.

PHILOSOPHY OF EDUCATION

University of London (Institute of Education). **Diploma in the Philosophy of Education:** to be awarded to candidates who wish to obtain concentrated training in the Philosophy of Education (mainly lecturers in colleges and departments of education) and who are not eligible to take the new one-year course leading to the London M.A. in Education (course introduced 1965). The course leads to examinations in the Philosophy of Education and in an optional subject chosen from among Ethics, Social Philosophy, Epistemology and Philosophy of Mind, Philosophy of History, Philosophy of Religion, Aesthetics and Philosophy of Science.

PHYSICAL EDUCATION

University of Leeds (Institute of Education, in association with Carnegie College of Physical Education). **Diploma in Physical Education:** awarded after a one-year course to experienced physical education teachers, designed to provide an opportunity for the advanced study of Physical Education in either the primary or the secondary school.

PRIMARY EDUCATION

Cambridge Institute of Education. Associateship Diploma in Primary Education: awarded to experienced teachers after a one-year course at advanced level in current educational practice in primary schools, including nursery schools. The course acts as a preparation for posts of further responsibility in Primary Education, either in schools or in colleges of education.

University of Durham (Institute of Education). **Diploma in Primary Education:** awarded after a one-year full-time course and a year's part-time study. Candidates must be teachers with at least five years' experience, some of it in primary schools. The course covers the latest developments in primary education and includes practical work; students prepare a written report at the end of the two-year period.

University of Leeds (Institute of Education). **Diploma in Primary Education:** awarded after a one-year full-time course to experienced teachers. The object of the course is to provide an opportunity for advanced study of the development of young children, with special reference to modern educational practice in nursery, infant and junior schools.

University of London (Institute of Education). **Diploma in Primary School Education:** awarded to experienced teachers after a one-year course at the Froebel Institute College of Education (London, S.W.15). The main aim of the course is to provide students with a necessary re-orientation before taking posts of further responsibility in primary school education. **Diploma in the Education of Children in the Junior School:** awarded to experienced teachers after a one-year course at Maria Grey College, Twickenham. The course is intended to prepare students for further responsibility in primary education and to provide an opportunity to consider their previous experience in the light of reading, discussion and educational visits. **Certificate in Junior School Education:** awarded to experienced teachers after a two-year part-time (evening) course.

University of Newcastle (Institute of Education). **Diploma in Primary Education:** awarded to experienced teachers and college of education lecturers after a one-year course followed by one or two years' part-time study. Students are required to acquaint themselves with the latest work in primary education.

University of Sheffield (Institute of Education). **Advanced Certificate in Education (Primary):** awarded after seven terms, one of which is full-time; the course is open to qualified teachers with not less than three years' teaching experience and is intended

to provide teachers with an opportunity for further study of the development of young children and ways of learning in primary schools.

University of Wales (Cardiff). **Diploma in Education in the Junior School:** awarded to experienced teachers after a one-year course dealing with the development of children and with the junior school curriculum.

PROGRAMMED LEARNING

University of Birmingham (Department of Education). **Advanced Diploma in Programmed Learning:** awarded after a one-year course leading to examinations and a dissertation. The course, which is subject to University approval, is intended to equip teachers to teach programmed learning in colleges of education and departments of education. The course includes practical work and a certain amount of research.

RELIGIOUS EDUCATION

University of Aberdeen. **Diploma in Religious Education:** awarded to students who have taken the Ordinary Class of Biblical Study in their degree course, have passed the degree examination and a prescribed course of training in methods of Religious Education at Aberdeen College of Education and have reached a satisfactory standard in the practice of teaching. **Higher Diploma in Religious Education:** awarded to students who have taken the Ordinary and Advanced Classes in Biblical Study in their degree course, have passed the degree examination in these subjects, have completed a course of training in the methods of Religious Education at Aberdeen College of Education and have reached a satisfactory standard in the practice of teaching.

University of Leeds (Institute of Education). **Diploma in Religious Education:** awarded to experienced teachers after a one-year course of advanced study in Religious Education, including theological study and the principles and practice of teaching religion to children and young people.

University of London (Institute of Education). **Diploma in Religious Education:** awarded to experienced teachers after a one-year course of study in the content, principles and methods of Religious Education.

University of Nottingham (Institute of Education). **Diploma in Religious Education:** awarded to experienced teachers after a one-year course on the Old and New Testaments, church history

and the philosophy and psychology of religion, together with the practical problems of the religious education of children.

RURAL EDUCATION

University of Reading (Institute of Education). **Diploma in Rural Education:** awarded after a one-year course particularly suited for teachers seeking or holding posts of special responsibility in country schools and for teachers preparing themselves for posts in colleges of education and the organisation of Rural Education. The course includes special studies in Rural Sociology and Educational Theory applied to a rural setting, studies in the basic sciences and methods of teaching them.

SCIENCE

University of Leicester (School of Education). **Diploma for Teachers of Science:** awarded to experienced teachers after a three-year part-time course designed to provide further study of the subject as well as to deal with its cultural background and methods of teaching it.

University of London (Institute of Education). **Certificate in the Teaching of Science:** awarded to experienced teachers after a two-year part-time (evening) course.

University of Newcastle (Institute of Education). **Certificate in the Teaching of Science:** awarded to experienced secondary school teachers after a two-year part-time course.

SECONDARY EDUCATION

Cambridge Institute of Education. Associateship Diploma in Secondary Education: awarded to experienced teachers after a one-year course of advanced study. The course includes a study of adolescence, the psychology of learning and emotional development, the philosophical issues underlying educational practice and educational sociology.

University of Leeds (Institute of Education). **Diploma in Secondary Education:** awarded to experienced teachers after a one-year course of advanced study of the Principles of Secondary Education, the organisation and curricula of secondary schools, aspects of secondary schooling in its various forms, together with the special study of one type of school.

University of London (Institute of Education). **Certificate in the Theory and Practice of the Secondary School:** awarded to experienced teachers after a two-year part-time (evening) course.

University of Newcastle (Institute of Education). **Diploma in the Further Study of Education:** awarded to experienced teachers after a three-year part-time course.

SPECIAL INVESTIGATIONS

University of London. Associateship of the Institute of Education: awarded to experienced teachers on the submission of a report on research carried out during one year's full-time study.

SPECIALIST STUDIES (MATHEMATICS)

University of Hull (Institute of Education). **Diploma in Specialist Studies (Mathematics):** awarded after a one-year course to experienced teachers of graduate standard. The course covers the general study of Secondary Education, including learning theory, and the teaching of Mathematics.

WELSH STUDIES

University of Wales (Bangor). **Diploma in Welsh Studies:** awarded to experienced teachers after a one-year course, examinations and the submission of a dissertation. The course is intended to equip teachers to assume responsibility for specialised teaching in the broad field of contemporary Welsh Studies.

TEACHERS OF THE BLIND

Teachers in schools for the blind in England and Wales must either have taken the one-year course of training for teachers of the blind conducted by Birmingham University Education Department (leading to the Diploma in Special Education (Blind), *see* page 1037) or have passed the examination for the **School Teacher's Diploma of the Royal College of Teachers of the Blind** (Royal School for the Blind, Westbury-on-Trym, Bristol).

Candidates for the Diploma must have had at least four terms' approved experience in schools for blind pupils, be qualified teachers or approved temporary teachers. The examination is also open to overseas candidates who are fully trained teachers, fluent in English (oral and written) and have had four terms' experience in teaching blind children (two of them in an approved school for the blind in the United Kingdom).

The examination is in two parts. Candidates must take all subjects in Part I, which are Braille reading, Braille writing and full education development. In Part II candidates must take one of the following subjects:

Nursery and infant class work; infant and junior class work; junior class work; senior class work; English; a foreign language; General Science; Geography; Handicrafts; History; domestic subjects; Mathematics; Music; Physical Education; Religious Education; Braille shorthand and typewriting.

Normally, teachers responsible for a class or for teaching a variety of subjects must select one of the first four subjects; candidates may choose one of the remainder only if they specialise in that subject throughout their school or department. Candidates are tested on their practical teaching ability and take an examination in the teaching of their subject to blind children.

The Diploma may be awarded with 'Distinction', 'Credit' or 'Pass'.

HOME TEACHER OF THE BLIND

Home teachers must obtain, either before or within two years of starting work, the **Certificate for Home Teachers of the Blind of the Royal College of Teachers of the Blind** (Royal School of Industry for the Blind, Westbury-on-Trym, Bristol).

Candidates must be at least 21 years old, have reached a good educational standard and either have taken a one-year training course (*see below*) or have had practical experience with a Home Teaching Service.

To obtain the Certificate candidates must pass in Sections I to IV and in three subjects from Section V. The examination covers the following subjects: I, Standard English Braille; II, Moon system; III, Professional knowledge (oral and practical training); IV (a) Professional knowledge (theoretical), (b) professional knowledge (case work), (c) professional knowledge (the deaf-blind); V, Home occupations (three or four to be chosen by the candidate)—chair caning, rush seating, hand knitting, pulp canework, rug making, stool seating in seagrass and cord, typewriting.

The Certificate is awarded as 'Pass', 'with Credit' or 'with Distinction'.

Details of the one-year courses leading to this Certificate may be obtained from:

Southern Regional Association for the Blind (14, Howick Place, Westminster, London, S.W.1).

North Regional Association for the Blind (17, Blenheim Terrace, Leeds, 2).

Scottish National Federation for the Welfare of the Blind (4, Coates Crescent, Edinburgh, 3).

Craft Instructor's Certificates of the Royal College of Teachers of the Blind. Candidates for any of these certificates must pass in all three sections of the examination:

- (1) Technical knowledge and ability — theory paper, practical test and specimen work to be submitted.
- (2) Teaching—paper and practical demonstration.
- (3) Braille and Deaf-Blind Manual — reading and writing Braille, and use of Manual Alphabet for the deaf-blind.

The Certificate is awarded for each of the following crafts:

basket making; mat making; boot and shoe repairing; brush making; pianoforte tuning and repairing; circular machine knitting; flat machine knitting; hand loom weaving; bedding; upholstery; light basketry and allied handicrafts (women only).

Question papers may be set in Braille if required.

TEACHERS OF THE DEAF

Teachers who wish to work in schools for deaf and/or partially hearing children must first obtain an initial qualification. There are several methods of getting the necessary additional qualification recognised for teachers of the deaf by the Department of Education and Science:

University Certificate for Teachers of the Deaf (Manchester University Department of Audiology and Education of the Deaf): awarded after a one-year full-time course of training, which may be taken immediately after obtaining an initial qualification or after a few years' service. For Scottish students this is currently the only means by which they may become qualified teachers of the deaf.

Diploma in the Education of the Deaf (London University Institute of Education): awarded after a one-year full-time course open to teachers with at least five years' experience. Preference may be given to teachers who have some experience of teaching deaf or partially hearing children.

Teacher's Diploma of the National College of Teachers of the Deaf (N.C.T.D. Examination Board, Nutfield Priory School, Redhill, Surrey): awarded on the results of an external examination after a period of part-time study. The examination may be taken after not less than 18 months' and not more than three years' service in a recognised school for the deaf or partially hearing. Teachers study for the Diploma whilst in service.

Diploma for Teachers of the Deaf (University College, Dublin): this Diploma is recognised by the Department of Educa-

tion and Science and also entitles the holder to an addition to salary.

Teachers with not less than two years' experience in the teaching of the deaf may be admitted to the advanced one-year course of study leading to the University of Manchester **Diploma in Audiology** (*see* page 1037).

OTHER QUALIFICATIONS

TEACHER'S CERTIFICATES IN SHORTHAND AND TYPEWRITING (awarded by the Royal Society of Arts)

The examinations are open to candidates aged not less than 18; the Certificates may only be awarded when candidates reach the age of 20. Candidates must be qualified teachers in England and Wales (and the equivalent in Scotland and Northern Ireland) or must have reached an acceptable standard of education (e.g. the minimum requirement for admission to a college of education in England and Wales).

Possession of a Teacher's Certificate awarded by the Royal Society of Arts does not qualify the holder for the grant of qualified teacher status by the Department of Education and Science, but may be regarded as a useful indication of teaching skill.

Teacher's Certificate in Shorthand. Candidates must have a minimum shorthand speed of 80 w.p.m. Candidates who are not already qualified teachers will, on passing the examination, be considered as probationers until they become qualified teachers or produce evidence that they have taught shorthand satisfactorily throughout one academic year.

Teacher's Certificate in Typewriting. Candidates must have a minimum typewriting speed of 35 w.p.m. Candidates who are not already qualified teachers will, on passing the examination, be considered as probationers until they become qualified teachers or produce evidence that they have taught typewriting satisfactorily throughout one academic year.

TEACHERS' CERTIFICATES OF THE CITY AND GUILDS OF LONDON INSTITUTE

The C.G.L.I. conducts examinations for a Teacher's Certificate in Handicraft, a Technical Teacher's Certificate and a Domestic Subjects (Further Education) Teacher's Certificate (Subjects Nos. 162, 163 and 164). Teachers holding the first two certificates must take a course of professional training to obtain qualified teacher status,

TECHNICAL WRITING

The British Association of Industrial Editors Ltd.

Barclays Bank Chambers, 17, Church Road, Barnes,
London, S.W.13

Membership is open to men and women responsible in various ways for the production of house journals, which are publications 'issued periodically and not primarily for profit, by an industrial undertaking, a business house, a public service or an incorporated organisation membership of which consists mainly of people engaged in industry, business, commerce or public service'. Many members are full-time editors or editorial assistants; others are public relations officers, publicity or personnel managers and other executives whose responsibilities include the publication of a house journal.

The objects of the Association include the development of qualifications of members and the devising of means for testing the qualifications of candidates for admission to membership. The grades of membership are:

Fellow (F.B.A.I.E.).

Member (M.B.A.I.E.). Admission to Membership is determined at present by the membership committee but in due course admission to the grade of Member will be by examination only.

Associate.

Honorary Fellow and Honorary Member.

CITY AND GUILDS OF LONDON INSTITUTE
CERTIFICATES

Certificate in Technical Writing (No. 329). The first examinations in this new scheme are to be conducted in 1966. The syllabus is suitable either for those who are studying to obtain scientific or technical qualifications or who wish to take Technical Writing as a supplementary part of a technician or national certificate course, or for older people whose work requires them to communicate their knowledge or results.

The examinations take the form of a written paper and a three-hour writing project testing the candidate's ability to collect knowledge and write about one or more topics which are announced in advance.

Certificate in Technical Authorship (No. 229). Candidates for this Certificate must already hold the Certificate in Technical Writing (329, above). The Certificate examinations are taken

after a two-year part-time course; the Certificate is intended to be a normal qualification for technical authors in Electrical, Electronic or Mechanical Engineering.

Advanced Certificate in Technical Authorship (No. 229). This is taken after one further year's part-time study. It is intended to meet the needs of senior technical authors aiming at positions of responsibility and needing to know about the administrative, legal and economic aspects of a technical publications department.

TEXTILES

The Textile Institute

10, Blackfriars Street, Manchester, 3

Fellows (F.T.I.) must be at least 28 years of age and have at least three years' experience in practice or teaching of Textile Technology. Associates cannot apply for transfer until three years after election. Fellows are Chartered Textile Technologists.

Candidates must be either Associates of the Institute or satisfy the selection committee as to their standard of training in Textile Technology. They must also satisfy the selection committee that they have made substantial contributions to knowledge relating to the textile industry. Evidence for this may be provided in a number of ways, e.g. presentation of a thesis describing original investigation, contributions to technical or scientific publications or lectures, patents, and recognised research work.

Companions are members who have attained the age of 40 years and have satisfied the Council that they have substantially advanced the general interests of the textile industry.

Associates (A.T.I.) must be at least 25 years of age, and have been a Junior Student Member, Junior Member or Ordinary Member of the Institute. They are Chartered Textile Technologists.

Candidates for the Associateship must have passed the Associateship Examination or gained exemption from it. Evidence of general education must be provided, i.e. G.C.E. 'O' level passes in English Language, Mathematics, two science subjects (preferably Physics and Chemistry), or its equivalent. Students intending to offer Design and Colour or Merchant Converting in Part II of the examinations may substitute an arts subject or a foreign language respectively for one of the science subjects.

Licentiates (L.T.I.) must be at least 23 years of age and in Junior Student, Junior or Ordinary Membership for a total period of three years.

The methods of qualification for Licentiate are:

- (i) Passes in all four subjects of the Part I Examinations leading to the Associateship.
- (ii) Final C.G.L.I. certificate in Wholesale Textile Distribution or Retail Distribution or Tailors' Cutting and Tailoring, together with the Textile Institute's Certificate in Analysis and Testing of Textile Materials. Two years' subsequent experience is also required.
- (iii) H.N.C. in Textiles or approved related subject and a period of two years' subsequent industrial experience.
- (iv) Full Technological Certificate of the C.G.L.I. in textiles or a related subject, together with two years' subsequent industrial experience.
- (v) Certain other degrees and diplomas or professional qualifications, together with industrial experience of length depending upon the particular qualification.

Junior Student Members are between the ages of 18 and 20 years and are pursuing a course of study in textiles.

Junior Membership and **Ordinary Membership** is open to any person interested in the textile industry and in promoting the objects of the Textile Institute. Junior members are between the ages of 21 and 24.

EXAMINATIONS

The Associateship Examination is set in two parts. Partial or complete exemption may be granted from Parts I and II. Part II may not be taken less than two years after Part I. In Part II the candidate must pass in all three papers set in his chosen subject. There is a choice of ten subjects covering a wide range of Textile Technology, Science, Design and Engineering, and merchant converting.

Exemption may be granted as follows:

For exemption from the whole of the Part I Examination:

Bolton Technical College: Diploma in Textiles (awarded in 1963 or subsequently).

Bradford Institute of Technology: Diploma in Preparing, Combing and Spinning; Diploma in Cloth Manufacture; Diploma in Textile Design and Colour.

Huddersfield College of Technology: Diploma in Textile Technology.

Leeds University: Diploma in Textile Industries (a), (b), (c) and (d).

Leicester College of Technology and Commerce: Diploma in Textiles.

Manchester College of Science and Technology: University Certificate in Technology (Textile Industries).

Nottingham and District Technical College: Diploma in Textiles (Dyeing and Finishing).

Royal College of Science and Technology, Glasgow: Associateship of the Royal College of Science and Technology (A.R.C.S.T.).

For partial exemption from Part I of the Examination:

Huddersfield College of Technology: Diploma in Dyeing.

The following university degrees and professional qualifications give partial exemption from the Part I Examination and from the whole of the Part II Examination:

Queen's University, Belfast: Degree in Chemical Technology.

Manchester College of Science and Technology: B.Sc.Tech. in Textile Chemistry (Ordinary and Honours); Associateship of the Society of Dyers and Colourists (with Textiles as a major subject).

The following university degrees and college diplomas exempt holders from the whole of the Part I and Part II Examinations:

Bradford Institute of Technology: Dip.Tech. in Textile Technology.

Royal College of Science and Technology, Glasgow: Honours degree of B.Sc.Tech. in Textile Science.

Leeds University: Honours degrees in textile subjects.

Manchester College of Science and Technology: Honours or Ordinary degree in General Textile Technology, or Honours degree in Textile Engineering.

Graduates in other disciplines, e.g. Mechanical Engineering, Physics, Chemistry, who have been engaged for at least two years in the textile industry, may apply to sit the Part I Examination and for exemption from the Part II Examination. Such applications will be dealt with individually and on their merits. Acceptance will depend upon the nature and length of employment in the textile industry.

The Society of Dyers and Colourists

Dean House, 19, Piccadilly, Bradford, 1, Yorkshire

Fellows (F.S.D.C.) must be at least 30 years of age and be Associates or possess an approved Honours degree in science or

technology. In addition they must have at least four years' approved experience and have submitted evidence of effective contribution to the advancement of functional science or technology.

Associates (A.S.D.C.) must have passed G.C.E. 'O' level in English Language, Mathematics and two other subjects, or its equivalent. They must also pass prescribed examinations or have gained exemption from them, and had experience in the manufacture or application of colouring matters.

Partial exemption is granted from the Society's examinations to holders of qualifications equivalent in standard and range to the Society's examinations, provided the performance is equivalent to First or Second Class Honours in a university degree or its equivalent.

UNIVERSITY DEGREES AND DIPLOMAS

(i) FIRST DEGREES

Degree courses in Textiles are offered at the following universities. For details of higher degrees, see entries under individual universities in Part 4.

Leeds. B.Sc. in Textile Physics. Textile Engineering: 3 or 4 years. 'A' levels in Mathematics, Physics. **B.Sc. in Textile Industries:** 3 years. 2 'A' levels in science subjects. **B.Sc. in Colour Chemistry or Dyeing:** 3 or 4 years. 3 'A' levels including Chemistry. **B.Sc. in Textile Chemistry:** 3 or 4 years. 2 'A' levels including Chemistry. **B.A. in Textile Design, Textile Management:** 3 years. 2 'A' levels required.

Manchester. B.Sc. in Textile Chemistry: 3 years. 3 'A' levels including Physics and Chemistry. **B.Sc. in General Textile Technology, Textile Engineering:** 3 years. 2 'A' levels including Chemistry.

Strathclyde. B.Sc. in Fibre Science: 4 years. 2 'A' levels including Mathematics.

A 4-year full-time degree course in Textile Industries is offered at the **Belfast College of Technology** (degree of Queen's University of Belfast). 'A' levels in Physics and Chemistry preferred.

(ii) DIPLOMAS AND CERTIFICATES

Bradford I.T.: Postgraduate Diploma in Textile Technology. 1-year course.

University of Leeds: Postgraduate Diplomas in Textile Industries; 2 years full-time. Diplomas in Textile Industries; 3 years full-time. Diploma in Colour Chemistry and Dyeing; 4 years full-time.

University of Manchester (Faculty of Technology): College Associateship (A.M.C.S.T.) in Bleaching, Dyeing, Printing and Finishing; 3 years part-time.

Royal College of Science and Technology, Glasgow (University of Strathclyde): Associateship (A.R.C.S.T.) in Textile Technology; 4-years full-time; candidates must pass an entrance examination. Postgraduate Diploma in Advanced Fibre Technology; 1 year full-time. Certificate Course in Textile Manufacture; 2 years full-time.

(iii) DEGREES OF THE NEW UNIVERSITIES AND DEGREE OF THE C.N.A.A.

Courses at the following Institutes now lead to honours degrees of the new universities.

Bradford I.T. B.Tech. in Colour Chemistry and Dyeing: 3 years. 2 'A' levels including Chemistry required. **B.Tech. in Textile Technology, Textile Design:** 4 years sandwich. 2 'A' levels required, one in Mathematics for Textile Technology, one in Art for Textile Design.

A 4-year sandwich course at the Scottish Woollen Technical College leads to the **B.Sc. Honours degree of the C.N.A.A.**

NATIONAL CERTIFICATES

Ordinary National Certificates (O.N.C.) and **Higher National Certificates (H.N.C.)** are awarded in General Textile Technology. Entry to the H.N.C. course is only open to holders of the O.N.C. Entry to the O.N.C. course is by having four 'O' level passes with two from Mathematics, Chemistry, Physics, Chemistry with Physics, General Science, Biology, Science (Engineering), pass in English preferred. Alternatively, admission to the two-year part-time course is by successful completion of the General Textile Course.

COLLEGE ASSOCIATESHIPS AND DIPLOMAS

College	Duration	Award
Bradford Institute of Technology	3 years full-time	College Diploma in Preparing, Combing and Spinning
	3 years full-time	College Diploma in Cloth Manufacture
	3 years full-time	College Diploma in Textile Design and Colour
	2 years full-time	College Certificate in Cloth Manufacture
	2 years full-time	College Certificate in Combing and Spinning

<u>College</u>	<u>Duration</u>	<u>Award</u>
Blackburn Municipal Technical College	3 years full-time	College Associateship
Bolton Technical College	3 years full-time	College Diploma
Huddersfield College of Technology	3 years full-time 3 years full-time 2 years full-time 1 year full-time	College Diploma in Textile Technology College Diploma in Cloth Manufacture College Diploma in Yarn Manufacture College Certificate in Textile Technology for Merchants
Leeds College of Technology	2 years full-time	College Diploma in Gen- eral Clothing Technology
Leicester College of Technology	3 years full-time	College Diploma in Textiles
Hollings College for the Food and Fashion Industry, Manchester	3 years full-time	College Diploma in Clothing Technology
Nottingham and District Technical College	3 years full-time	College Diploma in Textiles
Salford Technical College	3 years full-time	College Diploma in Textile Distribution
Dundee Technical College	3 years full-time	College Diploma in Jute Manufacture
Derby and District College of Technology	2 years sandwich	College Certificate in Narrow Woven Fabric Manufacture
Leicester College of Art	2 years full-time	College Certificate in Textile Design
College for the Distributive Trades, London	1 year full-time	College Certificate in Textile Distribution

The Scottish Woollen Technical College, Galashiels: College Diploma courses in Textile Design, Textile Technology; 3-year full-time courses; 3 or 4 passes in S.C.E. Higher Grade required. College Associateship courses in Textile Design, Textile Technology; 4-year full-time courses; 3 or 4 passes in S.C.E. Higher Grade required.

Kidderminster College of Further Education: Diploma for Carpet Technologists; 3-year sandwich course; 3 'O' level passes required; College Diploma: 1-year full-time.

CITY AND GUILDS OF LONDON INSTITUTE EXAMINATIONS

C.G.L.I. examinations in Textiles are as follows:

Woollen and Worsted Manufactures (Subject No. 30).
(Intermediate and Final Certificates in a number of

- subjects. Full Technological Certificate: Dyeing of Wool and Associated Fibres.)
- Cotton Spinning (Subject No. 32).
- Plain Cotton Weaving (Subject No. 33). (Final.)
- Cotton Weaving and Weaving (Subject No. 34). (Cotton and man-made fibres.) (Intermediate.)
- Flax spinning (Subject No. 35). (Intermediate, Final. Full Technological Certificate.)
- Linen Weaving (Subject No. 36). (Intermediate, Final. Full Technological Certificate.)
- Manufacture of Silk and Man-made Fibres (Subject No. 37).
(Intermediate and Final Certificates in a number of subjects. Full Technological Certificate in Textile Technology.)
- Jute Spinning (Subject No. 38). (Intermediate, Final. Full Technological Certificate in Production Technology.)
- Jute Weaving (Subject No. 39). (Intermediate, Final. Full Technological Certificate in Production Technology.)
- Manufacture of Hosiery and Knitted Goods (Subject No. 40). (Final.)
- Mill Engineering and Services (Subject No. 41).
- Industrial Organisation (Subject No. 42).
- Chemistry as Applied to Textile Industry (Subject No. 43).
- Appreciation of Colour and Design (Subject No. 44.)
- Dyeing of Textiles (Subject No. 45). (Intermediate, Final. Full Technological Certificate.)
- Worsted Spinning Craft Certificate (Subject No. 330). (Intermediate.)

EXAMINATIONS OF THE REGIONAL EXAMINING BODIES

Union of Lancashire and Cheshire Institutes, National Certificates (O.N.C., H.N.C.) in Textiles; General course in Textiles; Textile and Pattern Design.

East Midland Educational Union. General course in Textiles; O.N.C. course in Hosiery Manufacture; Course in Dyeing and Finishing.

Yorkshire Council for Further Education. General course in Textiles.

TIMBER TECHNOLOGY

The Incorporated British Institute of Certified Carpenters

(founded 1890)

Alderman House, 37, Soho Square, London, W.1

Student members must be not less than 16 and not more than 20; they must be studying for or have passed either the Institute's examination for Associate membership or the C.G.L.I. Craft Certificate examination in Carpentry or Joinery/Woodcutting Machinist's work or equivalent.

Associate (A.I.B.I.C.C.). Candidates must be not less than 21, have worked as carpenters and joiners or woodcutting machinists for not less than five years and either have passed the Institute's Associateship examination or have obtained a first class pass in the C.G.L.I. Advanced Craft Certificate examination in Carpentry and Joinery. Woodcutting machinists must hold a C.G.L.I. first class Advanced Craft Certificate in Woodcutting Machinist's work and have passed the Institute's theoretical examination for Associateship.

Fellow (F.I.B.I.C.C.). Candidates must be not less than 25, have qualified as an Associate Member and either have passed the Institute's Fellowship examination or hold a H.N.C. in Building Subjects, Structural or Civil Engineering or have passed the Part I Final Examination of the Institute of Builders.

TRANSPORT

*(See also Navigation and Seamanship, page 857)***The Institute of Transport**

80, Portland Place, London, W.1

The Institute of Transport, which was founded in 1919, was incorporated by Royal Charter in 1926 to promote and co-ordinate the study and advancement of the science and art of transport in all its branches.

Associates need not be directly concerned with the provision of transport but must be qualified by the nature of their profession, experience and status to promote the Institute's objects.

Member (M.Inst.T.). Candidates must be over 30, Associate

Members, and have held for at least five years a high position of responsibility in one of the main forms of transport.

Associate Member (A.M.Inst.T.). Associate Membership is open to Graduates of the Institute who have passed the Associate Membership Examination provided they are at least 25 and have had five years' experience satisfactory to the Council in or in connection with one of the main forms of transport.

Graduates are Student members who have passed the Graduateship Examination, are at least 21 and have had three years' experience in or in connection with one of the main forms of transport.

Students must be at least 17 and must be engaged in or about to be engaged in transport. They must have G.C.E. 'O' level passes in English Language and three other subjects (or the equivalent).

PROFESSIONAL EXAMINATIONS

Graduateship Examination. Candidates must be Students of the Institute. The subjects of the Examination are:

Part I: Elements of Transport; Evolution of Modern Transport; English.

Part II: Economics; Principles of Law; Geography (with special reference to Transport).

Either Part of the Examination may be taken first or both Parts may be taken together.

Associate Membership Examination. Candidates must be Graduates of the Institute unless, having passed the Graduateship Examination, they do not qualify for election as Graduates by reason of age or length of transport service; in this case, they are allowed to take one Part. The subjects of the Examination are:

Part I: Transport Finance and Accounting; Law of Transport (Air or Inland or Sea); Elements of Statistics.

Part II: Economics of Air Transport or Economics of Inland Transport or Economics of Port Administration or Economics of Sea Transport; Management applied to Transport; Air Transport Operation or Port and Inland Water Transport Operation or Railway Transport Operation or Road Transport Operation or Sea Transport Operation.

Either Part of the Examination may be taken first or both Parts may be taken together.

Candidates over the age of 35 who have had at least five years' transport experience and who hold either an appointment of executive responsibility in Transport or a professional qualification

acceptable to the Institute may be permitted to submit a thesis instead of taking the Examinations.

Exemptions from subjects in both Examinations may be granted in respect of degrees and other qualifications.

Courses of instruction leading to the Institute's examinations may be taken at colleges of further education. Correspondence courses are offered by the Transport Tutorial Association Ltd. (c/o School of Business, Ealing Technical College, London, W.5) and the Pitman College of Transport (29, Pitman House, Godalming, Surrey).

The Industrial Transport Association

Lee House, London Wall, London, E.C.2

The objects of the Association include the advancement of the profession of industrial transport management and organisation and the education and training of persons engaged in the profession or connected with it.

Honorary Member (Hon. M.I.T.A.). Honorary Membership is conferred in exceptional cases only and in recognition of special services.

THE INSTITUTE OF TRANSPORT

Examinations for Associate Membership (A.M.Inst.T.)

AIR • RAIL • ROAD • PORT • SEA

Entry Requirements

G.C.E., 'O' Level in
English Language and
three other passes
or suitable equivalents.

Write to:

80 PORTLAND PLACE, LONDON W.1.

(i) CORPORATE MEMBERSHIP

Fellows (F.I.T.A.) are Members aged not less than 35 who have rendered such service to the Association as to warrant election.

Members (M.I.T.A.) must be not less than 30, have had at least seven years' satisfactory experience in industrial transport duties and have passed or been exempted from the Associate Membership Examination.

(ii) NON-CORPORATE MEMBERSHIP

Associates (A.I.T.A.) must be not less than 25, have had at least five years' satisfactory experience in some branch of transport duties and have passed or been exempted from the Associate Membership Examination.

Associate Members (A.M.I.T.A.) must be not less than 25, have had at least three years' satisfactory experience in transport duties and have passed or been exempted from the Associate Membership Examination.

Graduates (Grad.I.T.A.) must be not less than 19, be engaged in transport duties or have passed or been exempted from the Graduateship Examination and be of an acceptable general educational standard.

Students (Student I.T.A.) must be between the ages of 16 and 19, be of an acceptable general educational standard, wish to be educated in the transport profession and desire to take the examinations prescribed by the Association.

(iii) PROFESSIONAL EXAMINATIONS

There is no examination for Studentship; candidates should have G.C.E. 'O' level passes in the basic subjects in the Association's syllabuses (i.e. English, Geography and Mathematics).

The Graduateship Examination is in two parts. Part I consists of Elements of Transport, English and Statistics; Part II consists of the Law of Inland Transport, Economics and Economic Geography. Exceptionally able candidates may be awarded an Honours Pass.

Candidates who have a British degree in Commerce or Economics, with Transport as the main subject, or have passed the Graduateship Examination of the Institute of Transport may be exempted.

The Associate Membership Examination consists of papers in the Economics of Transport (any one among Inland Transport, Marine Transport, Air Transport), the Law of Transport (any one among the same three subjects) and Advanced Industrial Transport Management.

Candidates who are not less than 30 and are engaged on such transport duties as may satisfy the Association that they are qualified by education and experience may be allowed to submit a thesis instead of taking the Examination.

Candidates who have passed the Associate Membership Examination of the Institute of Transport, the Final Examination of the Institution of Electrical Engineers, the Institution of Mechanical Engineers, the Institution of Civil Engineers or hold an approved equivalent membership of the Institute of Road Transport Engineers may be exempted from the Examination.

(iv) TRAINING

Further education and other establishments holding internal examinations in the subjects of the Graduateship Examination may be recognised as examination centres.

The Institute of Traffic Administration

Northgate House, 20-24, Moorgate, London, E.C.2

The objects of the Institute, whose purpose is to blend a study of human relationships in industry and society with a study of transport techniques, include the improvement of standards of knowledge and training in the practice of traffic administration. The Institute will introduce professional examinations in 1968.

Fellow (F.Inst.T.A.). Persons of special distinction or eminence over the age of 30 who have held positions of high administrative responsibility may be elected to Fellowship.

Member (M.Inst.T.A.). Persons over the age of 30 who have been Associate Members of the Institute for at least five years and have given further proof of their fitness to hold positions of high administrative responsibility may be elected to Membership. Other persons deemed suitable by virtue of their extensive and important administrative duties in industry, commerce or transport may also be elected.

Associate Members (A.M.Inst.T.A.) must be over 22, have passed an examination approved by the Institute and have had not less than two years' administrative experience on an adequate scale. The approved examination is the Higher National Certificate in Business Studies with Transport Economics as a compulsory subject. Alternatively the Institute may accept a thesis on some aspect of traffic administration, providing it gives evidence of

original research and thinking, or consider applications from candidates with other qualifications, including the University of London Certificate in Transport Studies.

Associate (A.Inst.T.A.). Persons not less than 22 who are engaged in occupations ancillary to the transport industry not involving traffic administration may be elected to Associateship.

Graduate. Students may be regraded as Graduates at the age of 20, providing they satisfy the Institute's requirements in educational attainment and in connection with their careers. Candidates who are not less than 20 may also be graded as Graduates if they meet the Institute's examination requirements and produce evidence of satisfactory attainment. The examination requirements are either the Royal Society of Arts Diploma in Road Transport (Passenger or Goods) (*see* page 1064) or the Ordinary National Certificate in Business Studies.

Student. Studentship is open to applicants of not less than 16 years of age in junior positions in traffic administration.

UNIVERSITY DIPLOMAS

University of Liverpool. Diploma in Traffic Studies: awarded after not less than a one-year course to graduates, or candidates with an approved qualification in Civil Engineering or Architecture.

University of London (Department of Extramural Studies). Certificate in Transport Studies: awarded after a three-year part-time (evening) course.

COLLEGE CERTIFICATES

College Certificates in Shipping, sponsored by the Chamber of Shipping of the United Kingdom, are awarded by Liverpool College of Commerce and the City of London College (Moorgate, London, E.C.2).

The Certificates are awarded after two-year part-time courses to junior employees of shipping companies; candidates must be over 17 or have G.C.E. 'O' level passes in three or more subjects, including English. Successful candidates may be exempted from certain subjects in the Institute of Transport's Graduateship and Associateship examinations.

The subjects of the course are as follows:

Commercial Geography; Organisation of Commerce; Law of Sea Transport; Shipping; Principles of Accounts, Economics; Marine Insurance; Shipping, Organisation, Practice and Law.

Candidates must pass in all subjects to qualify for the award of a Certificate.

OTHER QUALIFICATIONS

Examinations in Road Transport Subjects of the Royal Society of Arts (18, John Adam Street, London, W.C.2) provide self-contained courses for drivers, conductors, inspectors, junior officials, clerical workers and others engaged in both passenger and goods transport as a supplement to their practical experience. It also serves as an introductory course for the further study required for the examinations of the Institute of Transport (*see* page 1059).

The subjects in which examinations are offered are as follows:

Communication and Report Writing; Road Transport Operation (passenger); Road Transport Operation (goods); Road Transport Records; Road Transport Accounts; Elements of Road Transport Engineering; Economics applied to Road Transport.

Certificates are awarded in each subject at two levels, first and second class (70% and 50% respectively). Candidates passing in at least five subjects including either road transport operation (passenger or goods) (Paper II) or road transport accounts are awarded a **Diploma in Road Transport**. The Diploma is accepted by the Institute of Transport as a qualification for Studentship, provided that the applicant has passed in communication and report writing or in some other acceptable examination in English Language.

TRAVEL AGENCY

The Institute of Travel Agents

6, Duke Street, St. James's, London, S.W.1

Honorary Membership (**Hon.M.T.A.I.**) is conferred in recognition of outstanding service to the Institute or the industry.

Life Membership is offered to Members and Associates who retire from active business.

Members (**M.T.A.I.**) must be at least 30 years old, have been Associates for at least two years and have been travel agents for the last ten years. For the final two years they should have been principals, directors or senior executives.

Associate Members (**A.T.A.I.**) must be over 21 years old,

have had at least five years' experience in travel agency, and have passed the Final Examination of the Institute (*see below*).

Graduate Members (Grad.T.A.I.) are those who have passed the Institute's Final Examination but have not the necessary experience to qualify for Associate Membership.

Student Members (Stud.T.A.I.) must be at least 16 years old and working or intending to work in the travel industry. They should either have passed G.C.E. 'O' level in English and at least three other subjects or produce evidence of a good standard of education. Students may not remain in this grade for longer than five years without attempting the Institute's examinations.

THE QUALIFYING EXAMINATIONS

The Intermediate Examination. Only students of the Institute are eligible to enter for this examination, which consists of papers on Geography; a foreign European language; general principles of Law; and English. Exemption is granted to university graduates in Commerce or Economics with Transport as a main subject and to graduates who have passed the Examination of the Institute of Transport.

The Final Examination qualifies a candidate for Graduateship and, with approved experience, for Associate Membership of the Institute.

Candidates must have passed the Intermediate. The Final is divided into two parts, which may be taken together or with a year's interval between them.

Part I consists of papers on Travel Agency Operation and the tourist value of the United Kingdom; Part II of papers on the tourist value of the European area and on currency, foreign exchange and insurance.

Study is by part-time or correspondence course.

The following colleges offer part-time courses leading to the Institute's Examinations:

Aberdeen Commercial College; Matthew Boulton Technical College, Birmingham; Filton Technical College, Bristol; High Peak College of Further Education, Derbyshire; Central College of Commerce and Distribution, Glasgow; Thurrock Technical College, Essex; Leeds College of Commerce; City of Liverpool College of Commerce; City of London College; North-Western Polytechnic; Manchester College of Commerce; Municipal College of Commerce, Newcastle upon Tyne; Sheffield College of Technology.

VETERINARY SCIENCE

MEMBERSHIP OF PROFESSIONAL BODIES

The Royal College of Veterinary Surgeons

32, Belgrave Square, London, S.W.1

To practise as a veterinary surgeon in Great Britain it is necessary to be registered by the Royal College of Veterinary Surgeons; to qualify for registration, candidates must hold a degree granted by one of the British Universities listed below, or a recognised Veterinary degree of certain overseas Universities.

Member (M.R.C.V.S.). Until 1948 the only method of entry to the Register of Veterinary Surgeons (apart from some overseas degree courses) was by taking the examinations for the Diploma of Membership after study at a veterinary college affiliated to the Royal College. Since 1948 the responsibility for examining has been passed over to the Universities, although the Royal College is still responsible for registering qualified veterinary surgeons. Registered 'vets' may apply for Membership of the Royal College.

Fellow (F.R.C.V.S.). The Diploma of Fellowship is taken after a period of postgraduate study.

The British Veterinary Association

7, Mansfield Street, London, W.1

Membership of this Association is restricted to Members of the Royal College of Veterinary Surgeons or holders of qualifications which would enable them to be registered by that college.

UNIVERSITY DEGREES AND DIPLOMAS

(1) FIRST DEGREES

University of Bristol. B.V.Sc.: 5 years. Entry requirements: 3 'A' level G.C.E. passes including Chemistry, and one from Zoology and Biology and one from a mathematical subject, Physics and Botany (Botany provided that Physics or, exceptionally, Physics with Chemistry has been passed at 'O' level).

University of Bristol. B.V.Sc.: 6 years. Entry requirements: 2 'A' level G.C.E. passes. Candidates with Arts subjects may apply. 'O' level passes in Mathematics and a science subject are desirable.

University of Cambridge. Vet. M.B.: 5 years. Entry re-

quirements: 2 'A' level G.C.E. passes. G.C.E. passes at both levels must include two languages other than English, a mathematical or scientific subject and one other approved subject; an approved paper in the Use of English or an alternative must be passed.

University of Edinburgh. B.V.M. & S.: 5 years. Entry requirements: 3 'A' level G.C.E. or S.C.E. passes including Chemistry and Physics or Biology; the third pass may be in any subject. Physics and Biology must be offered at 'O' level if not passed at 'A' level.

University of Glasgow. B.V.M.S.: 5 years. Entry requirements: 3 'A' level G.C.E. or S.C.E. passes preferably including Physics and Chemistry. Exemption from the first year of the course may be granted to applicants with 'A' level passes in Chemistry, Physics and Biology or Botany and Zoology.

University of Liverpool. B.V.Sc.: 5 years. Entry requirements: 3 'A' level G.C.E. passes preferred including Chemistry and Biology or Zoology or Mathematics and, preferably, Physics. Physics must be passed at 'O' level.

University of London, Royal Veterinary College. B.Vet. Med.: 4 years and 2 terms. Entry requirements: 3 'A' level G.C.E. passes including Physics, Chemistry and either Zoology or Biology. Candidates with two of these subjects and one Arts subject passed at 'A' level may, under certain conditions, be admitted to the course.

(ii) HIGHER DEGREES

Students may be accepted to read for a higher degree at the following Universities (Ph.D. is usually available).

University of Edinburgh. D.V.M. & S.: after 3 years' postgraduate study.

University of Glasgow. D.V.M.: 2 years' postgraduate study. **M.V.S.:** also 2 years' postgraduate study. This degree is usually awarded on the evidence of thesis and examination although the latter may be waived. These degrees are open only to Glasgow graduates.

University of Liverpool. M.V.Sc.: 2 sessions of higher study after B.V.Sc. **D.V.Sc.:** awarded to graduates of the University of 8 years' standing in respect of published work.

University of London, Royal Veterinary College. M.Vet. Med.: by examination or thesis.

(iii) UNIVERSITY POSTGRADUATE DIPLOMAS

University of Edinburgh. Diploma in Veterinary State

Medicine (D.V.S.M.); Diploma in Tropical Veterinary Medicine (D.T.V.M.).

London School of Hygiene and Tropical Medicine. Diploma in Bacteriology. Diploma in Applied Parasitology and Entomology (D.A.P. & E.).

University of London, Royal Veterinary College. Academic Postgraduate Diploma in Animal Health.

University of Manchester. Diploma in Bacteriology.

Animal Nursing Registration. Registration for examinations of the Royal College of Veterinary Surgeons is now usual for animal nursing auxiliaries working with veterinary surgeons. Registration and entry to the examinations are open to candidates who are at least 17 years old, have studied to G.C.E. 'O' level or a comparable standard and are employed at a centre approved by the College.

The examination is taken in two parts, preliminary and final, and covers anatomy and care of animals, nursing, techniques and diagnosis, radiography and obstetrics.

Auxiliaries are not qualified for independent practice, but only to assist a veterinary surgeon.

WATCH AND CLOCK MAKING AND REPAIRING

British Horological Institute Ltd.

35, Northampton Square, London, E.C.1

Fellow (F.B.H.I.). Fellowship is awarded to those who hold the First Class Certificate in Technical Horology (Final Grade) of the Institute and who have five years' practical experience. They must be at least 21 years old. People with outstanding knowledge or ability in the craft may also be made Fellows.

Craft Members (C.M.B.H.I.) are craftsmen employed in the industry who either have served an apprenticeship and worked in the trade for at least eight years; or have not been apprentices but have had at least 10 years' craft experience; or have obtained a First Class Certificate in the Intermediate Grade or a Second Class Certificate in the Final Grade of the Institute's examination

in Technical Horology and have at least five years' practical experience. Craft Members may display the Registered Craftsman's Emblem of the Institute.

Industrial Craft Members (I.C.B.H.I.) must satisfy the Council of their ability in one of the following subjects: Technical Direction; Research; Development; Design of Watches and Clocks; Tool Design; Hand Production of Prototypes.

Members (M.B.H.I.) are manufacturers (principals) and distributors of horological products. No examination qualification is required for this class of membership. Holders of the Institute's Diploma in Horological Salesmanship are also eligible for membership, even though they are assistants and not principals.

Associate Membership is open to both individuals and corporations. Individuals may be those who work in clock or watch manufacture but are not qualified for other grades of membership. This grade is also open to people and corporations interested in or associated with Horology, including antiquaries and collectors.

Student Members are people under the age of 21 years who are serving a term of apprenticeship or training under a Fellow or Craft Member of the Institute.

EXAMINATIONS

Examination in Technical Horology of the Institute. The stages of this Examination, Preliminary, Intermediate and Final, are taken during a five to six year term of apprenticeship. Part-time courses are available at some technical colleges and the Institute runs its own correspondence course. In each Grade students are awarded either a First or Second Class Certificate, for obtaining 66% and 40% marks respectively. The examinations cover Horology, Horological Drawing, Mathematics and practical work.

The Final Grade first class certificate qualifies a candidate for Fellowship of the Institute, and the Intermediate Grade first class and Final Grade second class certificates give admission to Craft Membership.

Diploma in Horological Salesmanship of the Institute. This qualification is taken after studying the Institute's correspondence course. It is especially suitable for assistants selling watches and clocks, and covers the history of time measurement and instrumentation, selling techniques and also business organisation.

Holders of the Diploma are eligible for Membership of the Institute (M.B.H.I.).

WEIGHTS AND MEASURES INSPECTORATE AND ADMINISTRATION

Certificate of Qualification of the Board of Trade (Controller, Standard Weights and Measures Department, 26, Chapter Street, London, S.W.1). This is an open examination for people who wish to take up work as weights and measures inspectors with the Board of Trade. Candidates must be at least 21 years old. There are no basic educational requirements.

The examination consists of written papers in the following subjects:

English essay; Arithmetic and Mensuration; Mechanics and Physics; Weighing and Measuring Practice; Acts of Parliament and Regulations; together with practical and oral tests.

Certain exemptions will be granted to holders of the Testamur Certificate of the Institute of Weights and Measures Administration.

The Institute of Weights and Measures Administration Weights and Measures Office, Tontine Road, Chesterfield

Fellows (F.I.W.M.A.). Fellowship may be granted to any member of at least 10 years' standing who has made an original contribution to knowledge or rendered distinguished service to Weights and Measures Administration.

Members (M.I.W.M.A.) must either hold a local authority appointment as Inspectors of Weights and Measures or, being engaged in this work under another kind of authority, hold qualifications acceptable to the Institute.

Life Members are elected from among retired members in recognition of exceptional services to the Institute.

Retired Members (M.I.W.M.A.) may also use the designatory letters.

Associate Members (A.I.W.M.A.) must be at least 18 years of age and have been employed as Assistants in a Weights and Measures Office for at least one year. They must also hold the Board of Trade Certificate of Qualification or the Institute's Testamur Certificate; or an approved alternative qualification.

Inspectors of Weights and Measures overseas may also be admitted to Associate Membership.

Honorary Members are those who are associated with Weights and Measures Administration, but are not Inspectors.

EXAMINATION

Weights and Measures Testamur Certificate. The examinations for this certificate are open to candidates who are at least 17 years old and who have been working for at least one year as assistants in a local authority weights and measures office. The examination, which must be taken in one sitting unless a candidate has been referred in one or more subjects, consists of the following sections: English essay and précis; general knowledge; Arithmetic; legal; Mechanics and Physics; Weighing and Measuring Practice; practical.

Partial exemption from the Examination for Inspectors of Weights and Measures is granted by the Board of Trade to holders of the Testamur Certificate. It is also accepted by the Institute as one of the qualifications for Associate Membership.

WELDING

The Institute of Welding

54, Princes Gate, Exhibition Road, London, S.W.7

Fellows (F.Inst.W.) are persons of scientific or technical eminence who have made a distinguished contribution to Welding or one of the allied processes.

Members (M.Inst.W.) must either be at least 30 years of age and Associate Members, and have been engaged for a sufficient period in an important position of technical or scientific responsibility in Welding or an allied process or be at least 35 years of age and have educational qualifications equivalent to those required for Associate Membership and have had at least five years in a position of scientific or technical responsibility in Welding or an allied process.

Associate Members (A.M.Inst.W.) must be at least 25 and have passed or gained exemption from the Associate Membership examination and received at least three years' appropriate practical training in Engineering or Metallurgy. They must also hold a position of technical or scientific responsibility in Welding or an allied process.

Non-Corporate Members are persons who, by education, training and experience, are qualified to undertake important professional functions in Welding or an allied process.

Associateship (A.Inst.W.) and **Graduateship (Grad.Inst.W.)** are now closed classes.

Students must be not more than 30 years of age and engaged in a course of study in Engineering or Metallurgy.

There is provision for **Industrial Corporate Membership**. This is intended for corporations, trade associations or technical societies or individuals representing firms.

EXAMINATION

The Associate Membership Examination is comprised of three sections.

Complete exemption is granted to holders of the D.A.E. in Welding Technology and approved equivalents or H.N.C. in Engineering or Metallurgy with two approved endorsements including Welding Technology.

Exemptions from Sections II and III are gained by holders of one of the following:

University degree or Dip.Tech. in Engineering, Metallurgy or Naval Architecture;

Corporate Membership of the member institutions of the E.I.J.C.;

Membership and Associate Membership of the R.I.N.A. and Associateship of the Institution of Metallurgists;

H.N.C. in Engineering or Metallurgy, together with an appropriate endorsement.

Exemption from Section IIA (Welding Metallurgy): H.N.C. in Metallurgy, L.I.M. (if inclusive of Physical Metallurgy).

Exemption from Section IIB (Design of Welded Structures and Assemblies): H.N.C. in Civil, Mechanical or Structural Engineering.

Exemption from Section IIIA (Inspection and Control) **and IIIB** (Welding Production and Economics): candidates' qualifications for exemption will be considered on their merits.

For persons with not less than 15 years' appropriate experience a technical report may be submitted in lieu of a pass in the Examination.

NATIONAL CERTIFICATES

Welding Technology may be taken as an endorsement to Higher National Certificates in Engineering or Metallurgy.

CITY AND GUILDS OF LONDON INSTITUTE EXAMINATIONS

C.G.L.I. examinations are held in the following subjects:

Welding (Subject No. 74); Ordinary and Advanced
 Welding in Relation to Plumbers' Work (Subject No. 90)
 Heating and Ventilating Engineering Fitter/Welder's Course
 (Subject Nos. 256, 257) (Oxy-acetylene and Metal Arc).
 Welding Craft Practice (Subject No. 323).

EXAMINATIONS OF THE REGIONAL EXAMINING BODIES

The following examinations are conducted by the various Unions:

Welsh Joint Education Committee: Welding; Welding Craft Practice.

East Midlands Educational Union: Welding.

Union of Educational Institutions: Welding.

Northern Counties Technical Examinations Council: Welding Technician's Course.

Union of Lancashire and Cheshire Institutes: Welding Craft Practice; Welders.

WELFARE OFFICERS

The Institute of Welfare Officers

56, Stamford Street, London, S.E.1

The Institute is a professional organisation for all kinds of welfare officers, or social workers, in industry, commerce, social organisations and agencies and national and local government departments. It does not conduct examinations for membership but expresses its requirements in terms of Social Science and other qualifications. Corporate Members are entitled to call themselves 'Registered Welfare Officers'.

(i) CORPORATE MEMBERSHIP

Fellows (F.W.I.) are elected by the Executive Council for distinguished service to the welfare profession, the Institute or the community at large.

Members (M.W.I.) must be at least 25 years old and hold one of the following qualifications:

A degree in Social Sciences or allied subjects.

A diploma in Social Sciences (full-time course of study).

A certificate in Applied Social Studies.

A general certificate in Social Sciences, and specialised qualifications such as Child Care Certificate, Mental Health Certificate, etc.

A Certificate of Recognition issued by the National Council for Training in Social Work, or by the Home Office; and must also be actively engaged, and have been actively engaged in full-time welfare functions for a period of not less than one year.

Candidates over 30 years of age on 1st January, 1965, may also be considered if they have either: (a) an extramural diploma or certificate in Social Sciences, and five years' full-time experience in welfare functions, or three years' full-time experience of welfare functions plus not less than three years as either an assistant or voluntary welfare officer; or (b) ten years' experience of full-time welfare functions.

Associate Members (A.M.W.I.). Associate Membership is open to candidates of not less than 25 years of age who must at the time of application be actively engaged in welfare work and who have either: (a) a diploma or certificate in Social Sciences, which has included a period of placement under a qualified tutor; or (b) an extramural diploma or certificate in Social Sciences plus one year's full-time experience of welfare functions.

Candidates over 30 years old on 1st January, 1965, may also be considered if they have either (a) five years' full-time experience of welfare work; or (b) three years' full-time experience of welfare functions together with three years' experience as assistant or trainee welfare officer, or three years' experience as a voluntary welfare worker with a recognised organisation or agency.

(ii) NON-CORPORATE MEMBERSHIP

Graduate Members (Grad.M.W.I.) must be at least 22 years old and must satisfy the following requirements: (a) are undertaking a full-time course of study in the Social Sciences and have proceeded to the half-way stage successfully; or (b) are undertaking an extramural course of study in the Social Sciences, have obtained their first-year pass certificate and additionally have one year's full-time experience of welfare functions, or two years' experience as assistant or trainee welfare officer, or voluntary worker with a recognised organisation or agency. Those who successfully complete their course may go on to Associateship of the Institute.

Candidates over 30 years old on 1st January, 1965, may be considered if they have five years' experience as assistant or trainee welfare officer, or five years' experience in voluntary social work with a recognised organisation or agency.

Affiliate Members are persons over 21 years old who are actively interested in welfare work.

Student Members are candidates over 17 years of age who are following a course in the social science subjects required for Corporate Membership of the Institute.

WELFARE OFFICER TO THE DEAF

Diploma and Certificate of the Deaf Welfare Examination Board (Hon. Registrar, 10, Treves Road, Dorchester, Dorset). This Board conducts examinations for workers among the adult deaf. Candidates for the Diploma or Certificate must be at least 23 years old and either have had three years' approved training in the work or be taking the two-year course in social work and eighteen months in service training of the British College for Welfare Officers to the Deaf (321, Green Lanes, Manor House, London, N.4). In any case candidates must hold G.C.E. (or equivalent) passes in English Language and at least three other subjects. The examination covers the following subjects:

First year: A.i, Social Studies; B.i, Special and Practical Skill in Education of the Deaf; C, Spiritual Ministration; C.i, Old Testament and one set book; C.ii, Church History.

Second year: A.ii, Social Studies; B.ii, Administration; B.iii, Interpretation; B.v, Physical and other aspects of deafness; C.iii, New Testament and one set book.

Third year: A.iii, Social Studies; B.iv, Individual problems; B.v, Physical and other aspects of deafness; C.iv, Religious work; C.v, Doctrine, worship and miscellaneous; practical and viva voce test.

The Diploma is granted to those who pass in all papers, **the Certificate** to those who pass in all except Spiritual Ministration (C); Paper C.iv is, however, compulsory.

Exemption from sections C.i, C.ii, C.iii and C.v for the examination is granted to ordained ministers, Theology graduates and holders of a certificate in Religious Knowledge.

Exemption from Section A of the examination is granted to graduates or holders of a diploma or certificate in Social Science.

WELFARE OFFICER TO THE ELDERLY

Officers should normally hold a degree, diploma or certificate in Social Science. Short courses are arranged by the National Old People's Welfare Council (26, Bedford Square, London, W.C.1) and in Scotland by the Scottish Old People's Welfare Committee of the Scottish Council of Social Service.

MENTAL WELFARE OFFICER

(See also separate section on Psychiatric Social Work, page 940 (Mental health officers in Scotland).) These officers are employed by local health authorities to help provide care for the mentally sick or subnormal. There are no specific qualifications for these officers, but they are usually required to hold a university diploma or certificate in Social Science. Some are seconded to study for the Certificate in Social Work of the Council for Training in Social Work.

WOOD SCIENCE

The Institute of Wood Science

6, Southampton Place, London, W.C.1

Fellowship (F.I.W.Sc.) is the senior grade of membership of the Institute.

Associates (A.I.W.Sc.) must have passed the Associateship Examination. This is normally open only to Certificated Members two years after passing the third year examination in Timber Technology. In addition to written papers, candidates must submit a thesis of 2,500 to 3,000 words on an approved aspect of Wood Technology.

Certificated Members (C.M.I.W.Sc.) must have passed the third year examination in Timber Technology (or in Timber Economics and Administration). They are, on application, admitted as Certificated Members.

WORK STUDY

The Institute of Work Study Practitioners

9-11, River Front, Enfield, Middlesex

(created by the amalgamation of the Institute of Work Study and the Institute of Incorporated Work Study Technologists)

(i) CORPORATE MEMBERSHIP

Fellows must be at least 30 years of age and have had at least five years as an Associate and have satisfied the Institute's examina-

tion requirements or submitted an approved thesis or made a significant contribution to the profession.

Associates must be at least 25 years of age and have had at least three years' practical experience and satisfied the Institute's examination requirements.

(ii) NON-CORPORATE MEMBERSHIP

Graduates must be at least 21 years of age and have satisfied the Institute's examination requirements, but not yet have gained the necessary experience.

Affiliates must be at least 25 years of age and have satisfied the Institute's requirements for experience, but not the examination requirements.

Students must be at least 18 years of age and be studying for the Institute's examinations.

(iii) EXAMINATIONS

The Institute's examinations are set for those wishing to qualify for corporate membership. For an interim period candidates may opt to sit either the **Work Study and Industrial Engineering Certificate** of the late **Institute of Work Study** or the examination of the late **Institute of Incorporated Work Study Technologists**. Complete exemption is not granted but **subject-for-subject exemption** is granted for the former examination on the basis of approved passes in:

Higher National Certificate in Mechanical Engineering or in Production Engineering; City and Guilds of London Institute Certificate in Work Study; Royal College of Science and Technology, Glasgow: Certificate in Industrial Management; British Institute of Management (Intermediate); British Institute of Management (Diploma); Cost and Works Accountants (Intermediate); Unilever Work Study and Management Techniques Course; Corporation of Secretaries; G.C.E. 'A' level in Economic History; B.A. degree in Economics; Reed Paper Group Basic Work Study Course; Urwick Work Study Diploma; Officers Long Course, R.N. School of Work Study; H.N.C. in Business Studies; College of Advanced Technology, Birmingham (Certificate of Work Study); Welsh College of Advanced Technology (two-year course in O. & M.); F. B. Trethewey & Partners Ltd. (Work Study Training Course and examinations); I.I.Tech. (Intermediate).

Applicants holding a degree of a university in the United Kingdom or Eire, a Diploma of Technology as approved by the National Council for Technological Awards, an H.N.D. in appropriate subjects, or those who have acquired Membership through examination of any of the Institutions of Civil, Mechanical, Electrical or Production Engineers, or the Institute of Cost and Works Accountants are invited to apply for exemption on a subject-for-subject basis.

A large number of technical colleges throughout the country offer courses in preparation for the Work Study and Industrial Engineering Certificate.

Examinations of the Late Institute of Incorporated Work Study. Applicants may, for the present, qualify for Membership of the Institute of Work Study Practitioners by passing Examinations in the style of those set by the previous Institute of Work Study Technologists.

The Intermediate Examination may be taken after six months as a Student. Exemption is granted from the Intermediate Examination in respect of a number of qualifications.

CERTIFICATE OF THE CITY AND GUILDS OF LONDON INSTITUTE

The C.G.L.I. conducts an examination in Work Study (Subject No. 195).

WORKS AND HIGHWAYS SUPERINTENDING

The Institute of Works and Highways Superintendents
Flat 5, Bloomsbury Mansions, Bloomsbury Way, London, W.C.1

(i) CORPORATE MEMBERSHIP

Fellows (F.Inst.W.H.S.) are elected from among members in recognition of distinguished service to the Institute or profession.

Members (M.Inst.W.H.S.) must be at least 30 years old and have been Associate Members for at least five years.

Associate Members (A.M.Inst.W.H.S.) must be employed in the Works, Highways, Cleansing, Sewerage, Transport or Administrative sections of a local authority or similar body. They must have passed one sectional examination of the Institute at Final level, other than that in Administration and Organisation.

Occasionally local authority employees who do not fulfil these requirements may be elected to Associate Membership.

(ii) NON-CORPORATE MEMBERSHIP

Associates (Assoc.Inst.W.H.S.) must be at least 18 years old, hold an approved appointment and have passed one sectional examination of the Institute other than that in Administration and Organisation at Intermediate level, or Administration and Organisation at Final level. Exceptionally local authority employees who do not fulfil these requirements may be elected to Associateship.

Students (Stud.Inst.W.H.S.) must be at least 16 years old and must either pass the Institute's non-technical Entrance Examination or hold an approved equivalent qualification.

Honorary Fellows (Hon.F.Inst.W.H.S.) and Honorary Members (Hon.M.Inst.W.H.S.). The Council may elect to these classes of membership any person who has rendered services to the Institute or the profession.

The Council also elects as **Life Members** or as **Retired Members** corporate members who have ceased to be actively engaged in local authority work. Retired Members and Life Members are entitled to use the designation for which they were eligible at the time of retirement, but the Retired Member must add the word (Retired) after his designatory letters.

(iii) THE INSTITUTE'S EXAMINATIONS

The Entrance Examination consists of one paper on Arithmetic, one on Mensuration and two on English.

Exemption will be granted to candidates who hold G.C.E. 'O' level passes in an English subject and Mathematics, or O.N.C. in an appropriate subject. Exemption may also be granted to candidates who have taken an approved course of training for skilled roadmen (National Joint Councils for Manual Workers and County Council Roadmen), and have been awarded the C.G.L.I. Certificate in Roadwork (No. 99).

The Sectional Examinations. Candidates for these examinations must be at least 18 years old and students of the Institute. Examinations are conducted at **Intermediate and Final level** in each of the following sections:

- I Administration and Organisation
- II Building Construction and Maintenance
- III Highways Construction and Maintenance
- IV Mechanical Transport and Plant
- V Public Cleansing
- VI Sewerage and Drainage.

Approved passes in various subjects lead to Membership of the Institute. Students must pass one section at Intermediate level within three years of becoming students or of reaching the age of 18 years.

Day and evening courses at technical institutions and a correspondence course are available in preparation for the examinations, and the Institute oversees a training scheme for supervisory officers which combines work for a local authority with attendance at a technical college.

YOUTH EMPLOYMENT OFFICERS

The Institute of Youth Employment Officers

County Education Offices, Castle Street, Worcester

(i) CORPORATE MEMBERSHIP

Fellows (F.I.Y.E.O.) must have been Members for at least 10 years and have given distinguished service in the work of the Institute.

Member (M.I.Y.E.O.). Associates who hold responsible posts in the service may be elected to Membership provided that they either hold the Diploma in Vocational Guidance or an approved alternative qualification or have had 10 years' experience in the service beginning before 1st May, 1961, and have been Associates for at least two years.

(ii) NON-CORPORATE MEMBERSHIP

Honorary Fellows (F.I.Y.E.O.) are persons, not professionally engaged in youth employment work, who have made outstanding contributions to the work.

Associates are professional youth employment officers who hold one of the qualifications listed below as admitting candidates to the examinations for the Diploma in Vocational Guidance.

Affiliates are either persons working in youth employment and studying for a qualification which will admit them as associates or students in a full-time course of training for the service.

Corresponding Members are either officers working in the service who are not eligible for other grades of membership, or individuals or institutions interested in the work of the youth employment service.

The Diploma in Vocational Guidance (Dip.V.G.) is awarded by the Youth Employment Service Training Board (41, Belgrave Square, London, S.W.1). The course for the Diploma may be taken at the Adult Education Centre, Lamorbey Park, Sidcup, Kent, and at the Manchester College of Commerce, or by correspondence study. Full-time courses at the above institutions last six months for graduates whose degree course included Psychology and for holders of a Social Science diploma or certificate; one year for other graduates, qualified teachers and other people over 23 years with a good standard of education and relevant experience. Part-time courses are also arranged.

To be eligible for the examinations for the diploma a candidate must hold one of the following qualifications:

A degree of a recognised university.

A diploma or certificate in Social Science.

A diploma in Municipal or Public Administration.

H.N.C. in any subject.

A qualification carrying qualified teacher status (*see Teaching*).

Completion or partial completion of one of the above full-time courses of training.

Pass in the Intermediate Examination of the Local Government Examination Board.

The syllabus for the Diploma covers the following subjects:

Section I: Part I—Administration of the Youth Employment Service; Part II—Administration of some social services related to young people; Section II: Education; Section III: Organisation of Industry; Section IV: Local and Central Government; Section V: Occupational Psychology with special reference to Vocational Guidance; Section VI: Study of Employment Conditions.

Candidates are required to pass examinations in these subjects and also to submit a thesis on an approved subject.

YOUTH LEADERSHIP

ENGLAND AND WALES

A youth leader must hold one of the following qualifications to be recognised as qualified by the Department of Education and Science:

- (a) Completion of a full-time course in Youth Leadership. These are run at The National College for the Training of Youth Leaders, Leicester; Westhill Training College (Selly Oak, Birmingham, 29); The Department of Education, University College, Swansea.
The Birmingham course lasts for two years and the others for one year. Candidates should normally have two 'A' level G.C.E. (or equivalent) passes for entry to the Swansea course; five 'O' level G.C.E. (or equivalent) passes for the other courses. They should also have experience of work with young people.
- (b) Completion of a full-time course run by The National Association of Boys' Clubs (17, Bedford Square, London, W.C.1) (in conjunction with the Extramural Department of Liverpool University) or by The Young Men's Christian Association (112, Great Russell Street, London, W.C.1).
- (c) Completion of one of the following courses: Full-time course at Moray House College of Education, Edinburgh, or Jordanhill College of Education, Glasgow. External Diploma in Social Studies, University of London. Diploma in Social Administration, London School of Economics, University of London.
- (d) A qualification recognised by the Department of Education and Science for qualified teacher status (*see* Teaching, page 1003).
- (e) A university degree or diploma in Social Science.
- (f) Five years' experience as a full-time youth leader completed by 1st August, 1963.
- (g) University of London Extramural Diploma in Sociology provided that the leader was in service on 1st August, 1961, and has had 2½ years' full-time experience.

SCOTLAND

Candidates for youth leadership posts in Scotland are normally expected to hold one of the following qualifications:

- (a) A Diploma awarded after completion of a two-year full-time course at Moray House College of Education, Edinburgh, or Jordanhill College of Education, Glasgow.
- (b) A Certificate awarded after a two-term course at the above colleges. This short course is open to those who hold a degree or other qualification in Social Science or who are certificated teachers.

These qualifications (a) and (b) make a candidate who is employed by a local education authority eligible for the salary scale for qualified youth leaders agreed by the National Joint Industrial Council for Local Authority Services (Scotland).

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